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Mine company (company and mine site)
Government

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Mine company

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Government level

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ANNEXURE I

Indicator sheets

Mine company (company and mine site)

Government

Company Name: ____

TERI

Indicator testing sheet

Company level

Name of company	
No. of working leases	
Area of lease/s (ha)	
No. of employees incl. at H.O.	
Total ore produced in reporting year (in mn. tonnes)	
Gross earnings Rs/annum	
Date of reporting:	
Reporting period (please specify year to which info applies)	

Issues	Indicators	Relevance to good practice, corporate social responsibility /sustainable development *objectives*	Unit of measure-ment	Actual data (to be filled)	Comments Is the indi-cator useful? Yes/No	If data do not exist can they be collected? Yes/No
Worker	Amount spent on training or related costs	Indicates investment in human capital	Rs/annum			
	Average wage paid - skilled	Indicates CSR	Rs/annum/worker			
	Average wage paid - semi- skilled	Indicates CSR	Rs/annum/worker			
	Change in real average employee wage (VDA)	Improvement in financial welfare of workers	% change /annum			
	System for productivity linked pay increments	Attention to worker incentives	Yes/No			
	Health benefits provided to employees	Indicates commitment to ensuring employee welfare	Rs/annum			
	Health benefits extended to families of the employee	Indicates commitment to ensuring employee welfare	Yes/No			
	Comprehensive health insurance	Indicates commitment to ensuring employee welfare	Yes/No			
Worker related concerns	No of worker related problems	Indicates quality of management practices	No.			
	Role of staff in decision making	Indicates quality of management practices	Specify			
	Employment welfare schemes	Indicates managements concern for employees	Specify			
	Attention to occupational stress related disorders *(counselling, other)*	Indicates commitment to labour welfare	Specify type			
	Investment in injury prevention	*Indicates corporate social responsibility (CSR)*	Rs/annum			
	A full fledged health clinic with a regular doctor	Indicates CSR	Yes/No			
	ESI/welfare cess provided to employees	Indicates compliance	Rs/annum			
	Frequency and type of discrimination-related litigious action taken against company	Indicates performance of companies as it relates to equal opportunities	No/annum			
	Number and types of legal actions concerning anti-union practices	Indicator of corporate reputation and community relations	No/annum			
	"Local Hiring & Training" in employment policy	Indicates a commitment to local community development	Yes/No			
	Proportion of employees leaving employment before completion of contracted period	Indicates worker dissatisfaction or better prospects elsewhere	Workers/annum			
	Refusal rate for job offers	Indicates problems with reputation?	No./annum			
	Worker participation in management	Indicates decentalisation	Provide e.g.			
	Programmes to foster worker improvement (HRD programmes)	Investment in HC	No/annum			
	Phased rehabilitation of retired workers	Indicates CSR	Yes/No			
	Investment per worker in illness and injury prevention	Indicates CSR	Rs/annum			
	Counseling to workers affected by alcoholism or stress disorders	Indicates CSR	Yes/No			
	Staff grievance procedures in place	A mechanism to ensure worker grievances are heard by management	Yes/No			

Company Name: _______

Issues	Indicators	Relevance to good practice, corporate social responsibility /sustainable development objectives	Unit of measure-ment	Responses (to be filled)	Comments Is the indi-cator useful? Yes/No	If data do not exist can they be collected? Yes/No
Quality of management	Are tax/royalty amounts reported in company reports?	Makes available to public the extent of mineral wealth distribution between State and Co.	Yes/No			
	Proportion of women holding executive, senior and middle management positions	Indicates commitment to gender equality	No			
Capability to innovate	Level of R & D spending	Indicates investment in developing innovativeness	Rs/annum			
	Number of R&D personnel	Indicates investment in developing innovativeness	No/annum			
Market shares	Traditional markets	Indicates buyer commitments	% of exports			
	Emerging markets (last 10 yrs)	Indicates diversification/lost markets	% of exports			
Quality control	Is your company an ISO 9000 company?	Indicates effort to become world class	Yes/No			
Environmental management policy	*Environmental protection expenditures*	This indicates efforts by companies to protect environment	Rs./annum			
	Do you have an EIA and SA for your projects	Indicates efforts at baseline assessments	Yes/No			
	Is your company a ISO 14000 company or *aspiring to be one? Any other standard?*	Indicates effort to become world class Co.	Yes/No			
	Comply to national and local regulations	Indicates compliance	Yes/No			
	Supply information on request related to environmental performance and management	Indicates transparency	Yes/No			
	Arrange open days/ visits for the purpose of explaining environmental management at the site to members of the community	Indicates desire for good community relations and a good reputation	Yes/No			
	Proactively disseminate information regarding environmental performance to the public	Indicates desire for good community relations and a good reputation	Yes/No			
	Seek to educate the public about the environmental impact of mining and the remedial and preventative methods used by the company through various for a	Indicates transparency & desire for good social relations	Yes/No			
	Employ local people to assist the company in the prevention and remediation of environmental impacts at your project	Indicates an understanding of the importance of local knowledge & investment in good community relations	No.			
Closure issues (relevant to companies where mines are closing down)	Financial support for job search and relocation	Indicates CSR	Rs/ annum			
	Abandoned mine dump management	Indicates environmental responsibility	Rs/ annum			
	Plan for mine closure: environmental	Indicates environmental responsibility	Yes/No			
	Plan for mine closure: social rehabilitation	Indicates CSR	Yes/No			
	Compensation packages for workers	Indicates CSR	Yes/No			
	Plan for mine pit rehabilitation?	Indicates environmental responsibility	Yes/No			

Company Name: ________

Issues	Indicators	Relevance to good practice, corporate social responsibility /sustainable development objectives	Unit of measure-ment	Responses (to be filled).	Comments Is the indi-cator useful? Yes/No	If data do not exist can they be collected? Yes/No
Investment in the mining region: Human /physical	Investment in mine roads	Indicates CSR	Rs/annum			
	Investments in schools/training facilities	Indicates CSR	Rs/annum			
	Investment in toilets/sanitation facilities	Indicates CSR	Rs/annum			
	Percentage of corporate social investment budget to annual profit of company	Indicates commitment to social investments	%			
	Do you fund an occupational training centre?	Indicates commitment to social investments	Yes/No			
	Investment in community hospitals	Indicates CSR	Rs/ annum			
	Investment in playgrounds/clubs/parks	Indicates CSR	Rs/ annum			
	Are you a member of the Minerals Foundation for Goa?	Indicates CSR	Yes/No			
Social & community relations	Does your company have a community relations officer/team	Indicates a concern for ongoing attention to community concerns	Yes/no			
	Practice of community affairs officer reporting directly to the senior community affairs manager &/or GM	Indicates priority of community concerns in internal decision-making	Yes/no			
	Incidences of conflict between company personnel and community members at large	Indicates a dissatisfaction with mine operations	No/annum			
	Involvement in local affairs	Indicates investment in community	No. of awards/ scholarships given/a			
	Do you have any management staff drawn from local communities	The indicator aims to raise awareness of the possibility of local people being promoted to managerial positions	Yes/No			
	No. of litigious action against company	Indicates corporate reputation	No/annum			
	Corporate policy/mission statement demonstrating a commitment to community engagement & relations	Indicates that the head office is putting its weight behind a strategic direction	Yes/No			
Land access negotiation	A legalist approach or a post sale livelihood approach	Indicates concern with long term community relations	Legalist or livelihood?			
Participation	Existence of prior community consultation	Indicates consolation with stakeholders	Yes/No			
	Representation of local communities in decision-making	Indicates community consultation	Yes/No			
	Does your company provide community access to information	Indicates transparency	Yes/No			
	Research into community perception of the project	Indicates community engagement	Yes/no			
Effective governance	Time spent to get approvals under various Acts:	Indicates quality of service delivery	No. of months			
	Bureaucratic delays	Indicates quality service delivery	No. of days /file clearance			
	Time spent with bureaucrats	Indicates time away from core activity	No. of days/month			
	Need for 'incentives' to get things done	Indicates additional costs to company	No. of times			
	Citizens, businesses can file law suits against government	Indicates rights of citizens	Yes/No			
	Govt attentive to problems of company	Indicates quick problem resolution	Yes/No			

This indicator sheet is being prepared for the use of the mining industry. Do you have any suggestions for its improvements?
Your cooperation and assistance is greatly appreciated.

Mine Site: ____________

TERI
Indicator testing sheet

Mine Level

Name of company	
Name of mine project	
Lease No.	
Area of lease/s (ha)	
No. of workers relating to mine project	
Amount of ore produced from this project	
Which year was this mine opened?	
Date of reporting:	
Reporting period (please specify year to which info applies)	

Issues	Indicators	Relevance to good practice, corporate social responsibility/sustainable development objectives	Unit of measurement	Data to be filled	Comments: Is the indicator useful? Yes/No	Comments: If data do not exist can they be collected? Yes/No
Life of mine	Estimated R/P ratio of mine	It serves as a basis for estimating future iron ore supplies	In years			
		enabling proactive decision making to ensure				
		the efficient use of these resources over the longer term.				
Working conditions	No. of fatal accidents	An indication of changes in safety within the mine site	No/yr			
	No. of serious accidents	An indication of changes in safety within the mine site	No/yr			
	No. of minor accidents	An indication of changes in safety within the mine site	No/yr			
Ore quality	Min-max Fe grades	An indication of the amount of upgradation required	% Fe			
	Type of grade (lumpy etc)	An indication of benefication/processing required (time & money)	Tonnes/annum			
	Import high grade ore for upgrade	An indication of the additional costs	Tonnes/annum			
	Technological upgradation of low grade to high grade ore	An indication of increased competitiveness through technological efficiency	% of ore produced/annum			

Mine Site: ____________

Issues	Indicators	Relevance to good practice,corporate social responsibility/sustainable development objectives	Unit of measurement	Data to be filled	Comments Is the indi-cator useful? Yes/No	 If data do not exist can they be collected? Yes/No
Land for dumping	Existing area occupied by dumps	An indication of the degree of land squeeze generated by dumps	Ha			
	Additional barren land required for dumping	Indicates extent of land required as against actual available	Ha			
	Dump management such as terracing, contour, bunding, trenches, etc	An indicator of better environmental performance	Ha			
	Dumps on forested land	Indicates poor practice	Ha			
	Barren land used for dumping	An indicator of better environmental performance	Ha			
	Land reclaimed in dump area	An indicator of better environmental performance	Ha			
	Land reclaimed in excavated area	An indicator of better environmental performance	Ha			
	Land reclaimed in other areas (green belts etc.)	An indicator of better environmental performance	Ha			
	Agricultural land converted for dumps	An indication of the potential loss to agriculture	Ha			
	Vegetation undertaken on dumps	An indication of improved environmental performance	Ha under vegetation			
NGO/PIL pressure	Amount of time spent on litigation/court cases	An indication of lost management time;	Days/year			
	No. of court cases involved in	Same as above	No/annum			
	Expenditure on litigation	Same as above	Rs/annum			
Expenditure	Traditional (material, manpower, capital) expenditure	An indication of the changing nature of cost composition	% of operational costs			
	Environmental expenditure	An indication of the changing nature of cost composition	% of operational costs			
	Social expenditure	An indication of the changing nature of cost composition	% of operational costs			
Water	Waste water treated	This indicator assesses the potential level of pollution from mine project point sources entering the aquatic environment, and monitors progress towards reducing this potential. It is an indication of the potential reduction in fresh water use	% of ww generated			
	Tailings water recycled	An indicator of the amount of fresh water saved through recycling	% tw			
	Is there a payment of water cess?	An incentive for recycling	Yes/No			
	Is the mine working below water table?	Indicates constraints to operations	Yes/No			
	Benefication plant for effluent treated	Improved resource recovery	Yes/No			
	Expenditure on water quality improvement	This indicates efforts by companies to clean up and restore water quality	Rs/annum			
	Ground water pumped	Indicates joint production of water with ore	m3/t			
	Surface water used	The purpose of this indicator is to show the degree to which available water resources are being used to meet the sector's water demands	m3/t			

Mine Site: ______________

Issues	Indicators	Relevance to good practice,corporate social responsibility/sustainable development objectives	Unit of measurement	Data to be filled	Comments Is the indi-cator useful? Yes/No	If data do not exist can they be collected? Yes/No
Water	Are you monitoring the water quality in nearby water body	It indicates environmental concern	Yes/No			
	If yes, pl. provide: Water quality in waterbody, TSS		mgm/l			
	Water quality, BOD		(mg/l)			
	Water quality, PH					
	Metal concentration in sediment, Pb		μ gm/gm			
	Metal concentration in sediment, Cd		μ gm/gm			
	Metal concentration in sediment Hg		ngm/gm			
	Use of pumped out water	Indication of environmental concern and action	Yes/No			
	Pit water supplied for agricultural use after filtration	It indicates that water is being recycled and to that extent water is saved	Yes/No			
	Pit water supplied after treatment for drinking purposes	It indicates that water is being recycled and to that extent water is saved	Yes/No			
	Water utilisation from abandoned pits	It indicates a concern to convert a liability into an asset	Yes/No			
Air	Avg. amount of ore per truck leaving your mine site on a typical day	Potential for generation of fugitive dust	Tonnes/truck			
	Expenditure on air pollution abatement (green belt, watering of roads)	This indicates efforts by companies to clean up and restore air quality	Rs/annum			
	TP management practices adopted	Preventive measure	Specify			
	No of pits selected for backfilling or backfilled	Assess the potential for reducing overburden dumps and consequences thereof, if sites are selected with care not to affect groundwater	Number			
	Are you monitoring air quality in the mine?	Indicates environmental concern	Yes/No			
	If yes, pl. provide air quality SPM levels					
Biodiversity	Total number of exotic species introduced in mine lease area	Lack of knowledge or biodiversity concern	Number			
	Relative abundance of exotic species within mine lease area	Lack of knowledge or biodiversity concern	(% of particular group)			
	Area of restored or secondary forest	Indication of better biodiversity practice	Ha			
	Number of indigenous species used for revegetation	Indicates biodiversity concern				
	Area of man made forests /plantations		Ha			
	Annual land use change in mine lease		Ha			
	Amount spent on Post mining land reclamation	Expenditures provide a general indication of a company's efforts directed towards rehabilitating mined out areas.	Rs. /annum			

Mine Site: ______________

Issues	Indicators	Relevance to good practice,corporate social responsibility/sustainable development objectives	Unit of measurement	Data to be filled	Comments Is the indicator useful? Yes/No	If data do not exist can they be collected? Yes/No
Health	Alcohol related absenteeism	A possible indicator of lost productivity to company	Days/year			
	Health facility provided at mine site	Indication of concern to mine workers health	Yes /No			
	No of times workers use health facilities within mine	Indication of health status of mine workers or concern of mine companies	No of workers/annum or month			
	Medical expenses covered	Indicates CSR	Rs/yr			
	Attention to respiratory disorders	Indicates CSR	Specify type			
	Types of injury at mine site	Helps develop mine safety programmes	Specify			
Land: issues of compensation	Number of compensation payments made per year	A proxy indicator of impacts on agriculture and compensations made	Nos			
	Amount of compensation paid to farmers	An indicator of actual compensations made for impacts caused	Rs/ annum			
	Instances of disaffection relating to compensation payments	An indicator that perhaps compensations are not perceived adequately	No/annum			

This indicator sheet is being prepared for the use of the mining industry. Do you have any comments for its improvements?
Your cooperation and help is greatly appreciated.

ommunity health and well-being | Village level

TERI

Indicator testing sheet

ame of person:									
esignation:									
opulation of village:									
o. of operating mines									
o. of abandoned mines									
o. of mines closing down									
ate of reporting:									
ues	Indicators	Relevance to environmental & social sustainability objectives	Unit of measure-ment	To be filled	Comments Is the indi-cator useful? Yes/No	Do you collect the data Yes/No	If you do collect in what form	Are you the authority to collect the data Yes/No	If data do not exist can they be collected? Yes/No
VIRONMENTAL QUALITY									
ater quality	Monitoring level of of groundwater wells	Avoid water shortage	Frequency of sampling/month						
	Change in ground water recharging area	Anticipatory action	%of postulated baseline						
	Surface water monitoring	Ensure quality water to community	Frequency of sampling/month						
	Water pH (surface & groundwater)	Indicates level of water contamination	pH units						
	Water BOD (surface & groundwater)	To assess the quality of water available to consumers	mg/l						
	Water TDS (surface & groundwater)	To assess the quality of water available to consumers	mg/l						
	Water coliform (surface & groundwater)	It identifies faecal contamination of water	No.of coliforms/ml						
	Water turbdity (surface & groundwater)	To assess the quality of water available to consumers	mg/l						
	Wells dry up during summer	Indicates local aquifers are overused	% of wells in village						
	Silting of water bodies	Indicates reduced water retention capacity; flooding hazard	Stretch in km						
	Dependance on tankers	Indicator of potential contaminated water or shortage of water.	No.of hhs served by tankers/d						
	Shortage of water for domestic consumption	It helps to identify communities where these basic requirements are not met	lcpd<150lcpd						
	Frequency of truck movements	Fugitive ore dust is generated	No./day/road						
	SPM levels	Possible threats to health from exposure	ug/m3						
	Enforcement of air quality standards		No.of exceedances/yr						
	AQ Monitoring	To measure the exposure levels	Measurements/yr						

ssues	Indicators	Relevance to environmental & social sustainability objectives	Unit of measure-ment	To be filled	Comments Is the indi-cator useful? Yes/No	Do you collect the data Yes/No	If you do collect in what form	Are you the authority to collect the data Yes/No	If data do not exist can they be collected? Yes/No
Land	% area of primary forest or reserved forest								
	% area of degraded forest								
	% area under managed forest								
	Land use plan for mining areas	Indicates careful planning from the outset							
	Compositional changes in vegetation cover e.g. mono-cultural plantations		%of postulated baseline						
	Awareness of the community about the importance of afforestation								
	Soil monitoring		Analysis/yr						
	Existence of uncultivated land	Indicates agricultural land is affected	% of baseline						
	New areas brought under mining	Extent available for other uses	% of baseline						
	Increase in degraded land	Poor env. performance	% of baseline						
	Gain/decline in agri output per unit area or input	Impacts on farmers	% of baseline						
	Number of land slides/	Potential flooding hazards	No./yr						
	Changes in soil nutrient status								
	Changes in organic matter in soil								
	Siltation of agricultural land and		Area under silt						
	Increase in soil erosion								
	Expansion of area under colonies for mine workers, offices, workshops etc.		Ha						
	Cattle populaton		No./c						
	Cattle on roads	Indication of loss of grazing ground for cattle	No./km stretch						
	Tree planting		% of village/yr						
	Change in forest cover		% of forest cover						

ıes	Indicators	Relevance to environmental & social sustainability objectives	Unit of measure-ment	To be filled	Comments Is the indi-cator useful? Yes/No	Do you collect the data Yes/No	If you do collect in what form	Are you the authority to collect the data Yes/No	If data do not exist can they be collected? Yes/No
ıd for ɲping	Existing area occupied by dumps	An indication of the degree of land squeeze generated by dumps	Ha						
	Forest land used for dumping	Indicates land cover change	Ha						
	Barren land used for dumping	An indicator of better environmental performance	Ha						
	Land reclaimed in dump area	An indicator of better environmental performance	Ha						
	Land reclaimed in excavated area	An indicator of better environmental performance	Ha						
	Land reclaimed in other areas (green belts etc.)	An indicator of better environmental performance	Ha						
	Agricultural land converted for dumps	An indication of the potential loss to agriculture	Ha						
	Vegetation undertaken on dumps	Improved environmental performance	Ha under vegetation						
ıdiversity	Total number of exotic species introduced in mine l	Lack of knowledge or biodiversity concern	Number						
	Relative abundance of exotic species within mine le	Lack of knowledge or biodiversity concern	(% of particular group)						
	Area of restored or secondary forest	Indication of better biodiversity practice	Ha						
	Number of indigenous species used for revegetatio	Indicates biodiversity concern							
	Area of man made forests /plantations		Ha						
	Annual land use change in mine lease		Ha						
	Amount spent on post mining land reclamation		Rs. /annum						
alth/	Doctor to patient ratio		No.						
alth/	Basic sanitation		% of pop						
cilities	Access to safe drinking water		% of pop						
	Hospitals/PMC		% of pop						
	Number of hospital admissions due to accidents in mines	Assesses accidents occurring in mines	No./yr						
	No. of visits due to respiratory problems	Assesses the impact of air quality on health	No./yr						
	Number of patients with eye problems	Assesses eye problems occurring due to dust in the mines	No./yr						
	Number of road accidents	Assesses accidents occurring during ore transportation	No./yr						
	Number of patients treated for typhoid/cholera	Assesses level of faecal contamination, possibly due to inadequate sanitation facilities	No./yr						
	Number of salmonella typhi/paratyhpi (typhoid bacteria) and Vibrio cholerae	Provides an indication of faecal contamination, possible due to inadequate sanitation facilities	No.						

Issues	Indicators	Relevance to environmetnal & social sustainability objectives	Unit of measure-ment	To be filled	Comments Is the indi-cator useful? Yes/No	Do you collect the data Yes/No	If you do collect in what form	Are you the authority to collect the data Yes/No	If data do not exist can they be collected? Yes/No
Health/ Health Facilities cont.	Number of tests positive for enteric diseases (e.g. Widal)	Assesses spread of enteric diseases through waste							
	Number of hospital admissions due to diarrhoea/ dysentery	Assesses spread of enteric diseases	No./yr						
	Alcohol related visits to hospitals	Alcoholism	No./yr						
	State health expenditure devoted to local health care		Rs/yr						
	Motor vehicle accidents/injury		No./yr						
	Hospital admissions for childhood respiratory diseases		No./yr						
	Hospital admissions for other respiratory diseases	Assesses the impact of air quality on health	No./yr						
	Hospital admissions for TB	Assesses the impact of air quality on health	No./yr						
	Hospitalization by main cause								
	/hospital days by main cause								
	Ratio of hospital beds patients								
Closure phase	Unemployment rate		%						
	Net migration rate		%						
	Part time employment		%						
	Labour force participation		%						
	Worker to population ratio		%						
	Jobs lost by type		%						
	Diversity of local jobs		Alternatives available						
	Incidence of depression		No.of reported cases						
	Income stability								
	Water contamination								
	Preserve the top soil to use at time of mine closure								

ssues	Indicators	Relevance to environmetnal & social sustainability objectives	Unit of measure-ment	To be filled	Comments Is the indi-cator useful? Yes/No	Do you collect the data Yes/No	If you do collect in what form	Are you the authority to collect the data Yes/No	If data do not exist can they be collected? Yes/No
and: issues of ompensation	Number of compensation payments made per year	A proxy indicator of impacts on agriculture and compensations made	Nos						
	Amount of compensation paid to farmers	An indicator of actual compensations made for impacts caused	Rs/ annum						
	Instances of disaffection relating to compensation payments	An indicator that perhaps compensations are not perceived adequately	No/annum						
	Baseline data collected to establish compensation amount								

ANNEXURE II

Responses to the indicator testing: Mine company

For companies: ESPIs at mine site level

ISSUES	INDICATORS	USEFUL& FEASIBLE	NOT USEFUL	NOT FEASIBLE
Life of the mine	Estimated R/P ratio of mine	√		
Working conditions	No. of fatal accidents	√		
	No. of serious accidents	√		
	No. of minor accidents	√		
Ore quality	Min - Max Fe grades	√		
	Type of grade (Lumpy, etc.)	√		
	Import high grade ore for upgrade	√		
	Technological upgradation of low grade to high grade	√		
Land for dumping	Existing area occupied by dumps	√		
	Additional barren land required for dumping	√		
	Dump management such as terracing, contour, bunding, trenches, etc.	√		
	Dumps on forested lands		√	√
	Barren land used for dumping	√		
	Land reclaimed in dump area	√		
	Land reclaimed in excavated area	√		
	Land reclaimed in other areas (green belt, etc.)	√		
	Agricultural land converted for dumps	√		
	Vegetation undertaken on dumps	√		
NGO/PIL pressure	Amount of time spent on litigation/court cases		√	√
	No. of court cases involved in		√	√
	Expenditure on litigation		√	√
Expenditure	Traditional (material, manpower, capital) exp.			√
	Environmental expenditure	√		
	Social expenditure	√		
Water	Waste water treated	√		
	Tailings water recycled	√		
	Is there a payment of water cess?	√		
	Is the mine working below water table?	√		
	Beneficiation plant for effluent treated	√		
	Expenditure on water quality improvement	√		
	Ground water pumped		√	
	Surface water used		√	
	Are you monitoring the water quality in nearby water body?	√		
	If yes : TSS			
	Water quality BOD	√		
	Water quality pH	√		
	Metal concentration in sediment, Pb	√		
	Metal concentration in sediment, Cd	√		
	Metal concentration in sediment, Hg	√		
	Use of pumped out water	√		
	Pit water supplied for agricultural use after filteration	√		
	Pit water supplied after treatment for drinking purpose	√		
	Water utilisation from abandoned pits	√		
Air	Avg. amount of ore per truck leaving your mine site on a typical day	√		

ISSUES	INDICATORS	USEFUL&FEASIBLE	NOT USEFUL	NOT FEASIBLE
Air (contd.)	Expenditure on air pollution abatement (green belt, watering of roads, etc)	√		
	TP management practices adopted	√		
	No. of pits selected for backfilling or backfilled	√		
	Are you monitoring air quality in the mine?	√		
Biodiversity	Total no. of exotic species introduced in mine lease area	√		
	Relative abundance of exotic species within mine lease area	√		
	Area of restored or secondary forest	√		
	No. of indigenous species used for vegetation	√		
	Area of man made forests/plantations	√		
	Annual land use change in mine lease	√		
	Amount spent on post mining land reclamation	√		
Health	Alcohol related absenteeism		√	
	Health facility provided at mine site	√		
	No. of times workers use health facilities within mine		√	
	Medical reimbursement expenses	√		
	Attention to respiratory disorders		√	
	Types of injury at mine site	√		
Land Issues of compensation	No. of compensation payments made per year	√		
	Amount of compensation paid to farmers	√		
	Instances of disaffection relating to compensation payments.		√	√

Companies: indicators of internal and external CSR

ISSUES	INDICATORS	USEFUL & FEASIBLE	NOT USEFUL
Worker related concerns	Amount spent on training or related costs	√	
	Average wage paid: skilled	√	
	Average wage paid: semi-skilled	√	
	Change in real average employee wage (VDA)	√	
	System for productivity linked pay increments	√	
	Health benefits provided to employees	√	
	Health benefits extended to families of the employee	√	
	Comprehensive health insurance	√	
	No. of worker related problems		√
	Role of workers in decision making	√	
	Employment welfare schemes occupational	√	
	Attention to stress related disorders (councilling, other)		√
	Investment in injury prevention	√	
	A full fledged health clinic with a regular doctor	√	
	ESI/welfare cess provided to employees	√	
	Frequency and type of discrimination - related		√
	Number & type of legal actions concerning anti-union practices		√
	"Local hiring and training" in employment policy	√	
	Proportion of employees leaving employment before completion of contracted period		√
	Refusal rate of job offers		√
	Workers participation in management	√	

ISSUES	INDICATORS	USEFUL&FEASIBLE	NOT USEFUL
Worker related concerns (contd.)	Programmes to foster worker improvement (HRD programmes)	√	
	Phased rehabilitation of retired or laid off workers	√	
	Investment per worker in illness & injury prevention	√	
	Counselling to workers affected by alcoholism or stress disorders	√	
	Staff grievance procedures in place	√	
Quality of management	Are tax/royalty amounts reported in company reports?	√	
	Proportion of woman holding executive, senior and middle level management	√	
Capability to innovate	Level of R&D spending	√	
	Number of R&D personnel	√	
Market shares	Traditional markets	√	
	Emerging markets (last10 yrs)	√	
Quality control	Is your company an ISO - 9000 company?	√	
Environmental management policy	Environmental Protection Expenditures	√	
	Do you have an EIA and SA for your projects	√	
	Is your company an ISO -14000 company or	√	
	Aspiring to be one? Any other standard?	√	
	Comply to national and local regulations	√	
	Supply information on request related to environmental performance and management	√	
	Arrange open days/visits for the purpose of explaining environmental management at the site to members of the community	√	
	Proactively disseminate information regarding environmental performance to the public	√	
	Seek to educate the public about the environmental impact of mining and a remedial and preventative method used by the company through various fora	√	
	Employ local people to assist the company in prevention and remediation of environmental impacts at your project	√	
Closure issues (relevant to companies where mines are closing down)	Financial support for job search and relocation		
	Abandoned mine dump management	√	
	Plan for mine closure: environmental	√	
	Plan for mine closure: social rehabilitation	√	
	Compensation packages for workers	√	
	Plan for mine pit rehabilitation?	√	
Investment in the mining region: Human / Physical	Investment in mine roads	√	
	Investment in schools/training facilities	√	
	Investment in toilets/sanitation facilities	√	
	% of corporate social investment budget to annual profit of company	√	
	Do you fund an occupational training centre?	√	
	Investment in community hospitals	√	
	Investment in playgrounds/clubs/parks	√	
	Are you a member of the Minerals foundation for Goa?	√	

ISSUES	INDICATORS	USEFUL&FEASIBLE	NOT USEFUL
Social & community relations	Does your company have a community relations officer/team ?	√	
	Practice of community affairs officer reporting directly to the senior community affairs manager and/or GM	√	
	Incidences of conflict between company personnel and community members		√
	Involvement in local affairs	√	
	Do you have any management staff drawn from local communities	√	
	No. of litigious actions against company		√
	Corporate policy/mission statement demonstrating a commitment to community engagement and relations	√	
Land access negotiation	Type of approach to negotiations: A legalist approach or a post sale livelihood approach	√	
	Existence of prior community consultation	√	
Participation	Representation of local communities in decision making	√	
	Does your company provide community access to information	√	
	Research in to community perception of the project	√	
Effective governance	Time spent to get approvals under various acts.	√	
	Bureaucratic delays	√	
	Time spent with bureaucrats	√	
	Need for 'incentives' to get things done		√
	Citizen, businesses can file law suits against government	√	
	Government attentive to problems of company	√	

Local government: village level indicators

ISSUES	INDICATORS	USEFUL & FEASIBLE	NOT USEFUL
Environment:			
Water quality	Monitoring level of groundwater wells	√	
	Change in ground water recharging area	√	
	Surface water monitoring	√	
	Water pH (surface & groundwater)	√	
	Water BOD (surface & groundwater)	√	
	Water TDS (surface & groundwater)	√	
	Water coliform (surface & groundwater)	√	
	Water turbidity (surface & groundwater)	√	
	Wells dry up during summer	√	
	Silting of water bodies	√	
	Dependence on tankers	√	
	Shortage of water for domestic consumption	√	
Air	Frequency of truck movements	√	
	SPM levels	√	
	Enforcement of air quality standards	√	
	AQ Monitoring	√	
Land	% Area of primary forest or reserved forest	√	
	% Area of degraded forest	√	
	% Area under managed forest	√	
	Land use plan for mining areas	√	
	Compositional changes in vegetation cover e.g. mono-cultural plantations	√	
	Awareness of the community about the importance of afforestation	√	
	Soil monitoring	√	
	Existence of uncultivated land	√	
	New areas brought under mining	√	
	Increase in degraded land	√	
	Gain/decline in agri output per unit area or input	√	
	Number of land slides/annum	√	
	Changes in soil nutrient status	√	

ISSUES	INDICATORS	USEFUL & FEASIBLE	NOT USEFUL
Land (contd.)	Changes in organic matter in soil	√	
	Salutation of agricultural land and)	√	
	Increase in soil erosion	√	
	Expansion of area under colonies for mine workers, offices, workshops etc.	√	
	Cattle population	√	
	Cattle on roads	√	
	Tree planting	√	
	Change in forest cover	√	
Land for dumping	Existing area occupied by dumps	√	
	Forest land used for dumping	√	
	Barren land used for dumping	√	
	Land reclaimed in dump area	√	
	Land reclaimed in excavated area	√	
	Land reclaimed in other areas (green belts etc.)	√	
	Agricultural land converted for dumps	√	
	Vegetation undertaken on dumps	√	
Biodiversity	Total number of exotic species introduced in mine lease area	√	
	Relative abundance of exotic species within mine lease area	√	
	Area of restored or secondary forest	√	
	Number of indigenous species used for renegotiation	√	
	Area of man made forests/plantations	√	
	Annual land use change in mine lease	√	
	Amount spent on post mining land reclamation	√	
Health/ Health facilities	Doctor to patient ratio	√	
	Basic sanitation	√	
	Access to safe drinking water	√	
	Hospitals/PMC	√	
	Number of hospital admissions due to accidents in mines	√	
	Number of visits due to respiratory problems	√	
	Number of patients with eye problems	√	
	Number of road accidents	√	
	Number of patients treated for typhoid/cholera	√	

ISSUES	INDICATORS	USEFUL & FEASIBLE	NOT USEFUL
Health/ Health facilities (contd.)	Number of salmonella typhi/paratyhpi (typhoid bacteria) and Vibrio cholerae	√	
	Number of tests positive for enteric diseases (e.g. Widal)	√	
	Number of hospital admissions due to diarrhoea/dysentery	√	
	Alcohol related visits to hospitals	√	
	State health expenditure devoted to local health care	√	
	Motor vehicle accidents/injury	√	
	Hospital admissions for childhood respiratory diseases	√	
	Hospital admissions for other respiratory diseases	√	
	Hospital admissions for TB	√	
	Hospitalisation by main cause /hospital days by main cause	√	
	Ratio of hospital beds patients	√	
Closure phase	Unemployment rate	√	
	Net migration rate	√	
	Part time employment	√	
	Labour force participation	√	
	Worker to population ratio	√	
	Jobs lost by type	√	
	Diversity of local jobs	√	
	Incidence of depression	√	
	Income stability	√	
	Water contamination	√	
	Preserve the top soil to use at time of mine closure	√	
Land: Issues of compensation	Number of compensation payments made per year	√	
	Amount of compensation paid to farmers	√	
	Instances of disaffection relating to compensation payments	√	
	Baseline data collected to establish compensation amount	√	

ANNEXURE III
Responses to indicator testing: Government level

Town and Country Planning

- All the indicators are useful.
- With regard to the land issue, the Department of Science and Technology and Environment, Department of Industries and Mines, and the Agriculture Department are authorised to collect the data.
- TCP is consulted only if there is any construction within the mine lease area.
- TCP is the coordinating government body in the State Land Use Board. Indian Bureau of Mines and Directorate of Industries and Mines approve the mine plan.
- Remote sensing techniques and other maps including soil map are available with the Department of Science and Technology and Environment, hence they can monitor some of the indicators that are mentioned in this sheet.
- Another issue that needs to be addressed is, that the soil from mining is used (sold) for land-filling in other areas. This needs to be controlled.

Department of Agriculture

- All the indicators relating to issues like water quality, land and compensation are useful.
- Water quality data is collected by the Water Resources Department (Irrigation).
- The Department of Census and the Department of Science, Technology and Environment collect some of the data relating to issues of land.
- With regard to the issue of compensation; the Collector, the Mamlatdar and Zonal Agricultural Officer are involved. Department of Agriculture is involved only when complaints/applications are made and Department of Agriculture is involved to assess loss from agriculture. Compensation is for the profit lost and not for the cost of cultivation. The payments are made by mamlatdar/collector.
- Agricultural department is consulted when there is conversion from agricultural land to non-agricultural land for construction purpose. With regard to dumping of mining rejects on agricultural land, it is unclear under whose jurisdiction it comes.
- Data collected by Department of Agriculture is not continuously collected. It is also randomly collected largely when the need arises. The data collected is with regard to capability, erosion status and degradation studies.

Department of Forest

- All the indicators relating to issues like land and biodiversity are useful. The Forest Department collects some of this data.
- Whenever any mining activity is to be carried in a forest area that is within the mine leased area, then the mining company needs to obtain a clearance from the Department of Forest. At this point of time the mining companies then provide an inventory to the Forest Department. Within the lease area the role of the Forest

Department is limited and the Indian Bureau of Mines is the main government body, which has powers in the mining belt.

- There is no data on area exclusively used for dumping etc. The approval is given for diversion without a break-up of dumping area, pits, etc.
- Lease wise forest data is available, however the exact demarcation of leases is unclear. Forest area under each village is also available.
- Mines Environmental Council within the Indian Bureau of Mines is in charge of monitoring, as they collect data every 5 years.
- Earlier the Indian Bureau of Mines did not allow for back-filling in the mined area. However this has been changed now and this has resulted in the reclamation of land under forest area in mine lease area. Once the lease expires this land goes back to the forest department.

Department of Science, Technology and Environment

- All the indicators are useful.
- DSTE does not collect data with regard to issues like water quality, air, land etc. The groundwater act has a provision for monitoring, which the water resources department does.
- As flood control comes under the Water Resources Department, siltation of water bodies comes under Water Resources. If siltation affects river navigation then Captain of Ports is involved.
- Most of the data with regard to issues of land, data is maintained by Forest Department, Department of Industries and Mines, IBM, Department of Agriculture, and the *Panchayat* etc.
- SPCB monitors at point sources of pollution; non-point sources are not monitored. Monitoring is done when the need arises or when there is a complaint. Statutorily SPCB is not required to monitor.
- Department of Industries and Mines and IBM have concession map of active and non-active mine lease.
- DSTE have satellite imageries and can compare changes but this has no statutory backing. Other government departments can obtain this data from DSTE. DSTE is to provide scientific inputs and prepare maps. Research and development advice is not part of the statutory duty.
- Further no department can take action against violation of rules and regulations; instead they have to take the matter to the court.

Water Resources Department

- All the indicators relating to water quality are useful.
- WRD is the authorised government department to collect and publish the data relating to water quality.
- Data on water quality is currently collected by the PWD. However this is restricted to drinking water, and is done at the treatment plants. With the passing of the ground water bill, water resources department is now required to statutorily monitor the water quality of ground water.
- The ground water monitoring act will also lead to collection of data regarding recharge level, etc. As of now they are in the process of collecting all the data. Once this is completed, they plan to publish it; however this will be information on data collected and not provide inferences.
- As of now the data, which was available to the department, was from various small studies.

State Pollution Control Board

- All the indicators relating to issues like water quality and air, etc are useful.
- They are the authorised government body to collect the data relating to pollution. Data is collected and monitored when the need arises or when there is a complaint.
- Within the mine lease area all data regarding pollution is collected by IBM. SPCB looks at data outside the lease area. Here SPCB monitors on receipt of the complaints.
- SPCB is monitoring the water quality for around 32 parameters at their water stations along the Mondovi and Zuari River. This however does not cover the mining villages. This exercise is done for the Central Government. Air quality monitoring is done at two stations; Panaji and Vasco, this again is done for the Central Government. The parameters checked for air quality are given by the Central Government.
- SPCB is on various committees, including that on compensation and SPCB's role is advisory.
- Benefaction plant operation needs clearance from SPCB and SPCB monitors the processed water.
- SPCB can also give inputs to *panchayat* whenever approached.
- Water odour is another parameter, but this cannot be measured.

PWD

- All the indicators relating to water quality are useful.
- They collect data for most of the indicators relating to water quality. All the water quality parameters are checked at the treatment plants itself or the wells from where the water is supplied to villagers who are dependent on the PWD water tanker.
- Private wells are checked by the health services on receipt of complaints. Data for the mining villages can be procured from the Executive Engineer, Section 17, and Porvorim.
- The department of PWD supplies water through tankers.

Labour Commissioner & Director of Employment Exchange

- Department of Employment Exchange or the Department of Labour does not collect any data relating to issues of the closure phase. Since mining comes under the central government, the labour enforcement officer collects such data.
- The labour officer collects data on the retrenchment of workers. These workers are those who are on the muster roll and are in continuous service for a minimum of 240 days. Muster rolls of mining companies have data on the number of people employed but this does not include contract labourers.
- The Employment Exchange has data on the number of people who are unemployed and need assistance in seeking employment, and for this purpose have registered their names with the department.

Department of Panchayats

- *Panchayats* do not collect information relating to water quality, air quality, land, bio-diversity, health and health facilities, compensation and issues related to closure phase in the mining villages. However Schedule I of the *Panchayat* Act of 1994, lists out the duties of the *panchayats*. Thus legally *panchayats* are competent bodies to collect the above data. However, in practice it is not done due to lack of funds and staff. The Directorate of *Panchayats* appoints and pays for a secretary (Upper division clerk's scale) for each *panchayat*. Other additional staff needs to be appointed and paid by the *panchayats* itself. Lack of funds result in understaffed *panchayats*, which in turn retards their functioning. The *Panchayats* have powers and functions on par with that of the Municipalities, which are not discharged due to the above reasons. Further the *Panchayat* Act of 1994 empowered the third tier of the Government only recently. Prior to this act, the Collector's Office controlled the village *panchayats*. Director of *Panchayats* located at the Collectors office and the State government carried out most of the duties. *Panchayats* have allowed this trend to continue even today.

Department of Health Services

- All the indicators are useful.
- DHS collects the data on water quality whenever required or if there are any complaints from the village *panchayat* or villagers. They take samples of water from the wells which are used and not used by the people, and also from abandoned mine pits where water is logged, *nallahs,* drains which are the breeding sites for mosquitoes.
- Their sub-centres register number of cases, which are relating to different indicators or the primary health centres in the village either when people come to them or they visit the patients. Records from private practitioners are also collected by the DHS.
- The number of casualties due to mine related flooding is being taken care by the disaster management plan through the Collectorate of North and South Goa in which all the government departments are involved.
- Department of Health Services carry out various programmes such as health education, etc.
- Department of Health also conducts a survey in the villages which is conducted by the staff of the sub-centres or the primary health centres in which they collect many details such as the number of children born and have been immunized, malaria patients, TB patients, etc. The same data is then forwarded to the DHS by the primary centres for their records.
- DHS has a sub-centre in the villages for every 5000 people and a primary health centre for every 30000 people. Community health centre is also provided. There are two district centres, namely; Asilo and Hospicio.
- Sub-centres - one auxillary nurse, one male attendant
- One doctor visits once in a week.
- Primary centre: Three medical practioners.
- Drug detection centre, Asilo.
- Dr Sawant - is in-charge of TB Control Programme, near National Theatre.
- A STD clinic was earlier at Sanvordem. Now it is shifted to Margao
- GATES - 102: Goa Accident, Trauma and Emergency Services provide ambulance services to a number of centres and to anybody who requires it.

Department of Animal Husbandry

- Department of Animal Husbandry does not collect any data, it is done by the Department of Planning, Statistics and Evaluation. Department of Census collects it. Village-wise data is available in the summary sheets prepared by the Department of Planning, Statistics and Evaluation, but this is not published. Data regarding grazing lands is not available.

Department of Industries and Mines

- All the indicators are useful.
- Water quality or the air quality data is not collected by the DIM. Various different departments collect most of the data. Department of Industries and Mines have most of the data given to them by the mining companies for the renewal of the leases or any other purpose. DIM collects the data regarding issues like mine lease and economic issues relating to mining. Most of the data required in the indicator sheets are kept by the mine owners and this can be collected by the DIM, and hence will be in a suitable position to monitor.
- Mine owners are required to submit a mining plan, which includes land use plan. This is submitted to the IBM and DIM. The land use plan gives the scheme of mining which need not be true. Hence actual monitoring would be a better option.
- Baseline data is available since the 1950's.
- In case the DIM is brought into the issue of compensation, then they have data. But all the data could be collected from the revenue department.
- Department of Industries and Mines are in the process of preparing a database.

ANNEXURE IV

Sources for indicator data needs

DEPARTMENT: INDIAN BUREAU OF MINES

Issues: Water quality within the lease area
Indicators
Monitoring level of groundwater wells
Change in ground water recharging area
Surface water monitoring
Water pH (surface and groundwater)
Water BOD (surface and groundwater)
Water TDS (surface and groundwater)
Water coliform (surface and groundwater)
Water turbidity (surface and groundwater)
Wells dry up during summer

Issues: Air within the lease area
Indicators
SPM levels
Enforcement of air quality standards
AQ monitoring

Issues: Land within the lease area
Indicators
Land use plan for mining areas
New areas brought under mining
Increase in degraded land
Tree planting
Change in forest cover

Issues: Land for dumping within the lease area
Indicators
Existing area occupied by dumps
Forest land used for dumping
Barren land used for dumping
Land reclaimed in dump area
Land reclaimed in excavated area
Land reclaimed in other areas (green belts etc.)
Agricultural land converted for dumps
Vegetation undertaken on dumps

Issues: Mine lease related within the lease area

Indicators

Number of leases renewed

Number of mines actually in operation

Number of mines not worked for more than two years

Mine leases which fall under forest area

Number of abandoned mine pits

Number of ore stacks held by each operators

Monitoring of ore stack by roadside, jetty

Amount of ground water pumped from the pits mine wise

Number of pits with water

Issues: Economic within the lease area

Indicators

Actual production of ore mine wise

Ore exported

Royalty collected mine wise

Issue: Biodiversity within the lease area

Indicators

Total number of exotic species introduced in mine lease area

Relative abundance of exotic species within mine lease area

Area of restored or secondary forest

Number of indigenous species used for revegetation

Area of man made forests/plantations

Annual land use change in mine lease

Amount spent on post mining land reclamation

Issues: Closure phase within the lease area

Indicators

Water contamination

DEPARTMENT: WATER RESOURCES DEPARTMENT

Issues: Water quality

Indicators

Monitoring level of groundwater wells

Change in ground water recharging area

Surface water monitoring

Silting of water bodies

Dependence on tankers

Issues: Closure phase

Indicators

Water contamination

DEPARTMENT: STATE POLLUTION CONTROL BOARD

Issues: Air out side the mining leased area
Indicators
SPM levels
Enforcement of air quality standards
AQ monitoring
Level of Mn in air
Level of gases such as SO2, Nox,
CO in air
Dust concěmtration in air

Issues: Water quality out side the mining leased area
Indicators
Surface water monitoring
Water pH (surface and groundwater)
Water BOD (surface and groundwater)
Water TDS (surface and groundwater)
Water coliform (surface and groundwater)
Water turbidity (surface and groundwater)
Wells dry up during summer
Total viable count
Most probable number for potability of water
Total number of *E. coli* (indicator bacteria)
Total count of bacteria
Total dissolved solids
Total suspended solids
Level of arsenic in water
Level of various metals in water

Issues: Closure phase out side the mining leased area
Indicators
Water contamination

Issues: Compensation outside the mining leased area
Indicators
Number of compensation payments made per year
Amount of compensation paid to farmers
Instances of disaffection relating to compensation payments
Baseline data collected to establish compensation amount

DEPARTMENT: PUBLIC WORKS DEPARTMENT

Issues: Water quality
Indicators
Dependence on tankers
Shortage of water for domestic consumption

DEPARTMENT: FOREST DEPARTMENT

Issues: Land
Indicators
% Area of primary forest or reserved forest
% Area of degraded forest
% Area under managed forest
Compositional changes in vegetation cover e.g. mono-cultural plantations awareness of the community about the importance of afforestation
Tree planting
Change in forest cover

DEPARTMENT: HEALTH DEPARTMENT

Issues: Water quality
Indicators
Water coliform (surface and groundwater)
Most probable number for potability of water
Total number of *E. coli* (indicator bacteria)
Total count of bacteria

Issues: Health facilities
Indicators
Doctor to patient ratio
Access to safe drinking water
Hospitals/PMC
Number of hospital admissions due to accidents in mines
Number of visits due to respiratory problems
Number of patients with eye problems
Number of road accidents
Number of patients treated for typhoid/cholera
Number of salmonella typhi/paratyhpi (typhoid bacteria) and vibrio cholerae
Number of tests positive for enteric diseases (e.g. Widal)
Number of hospital admissions due to diarrhoea /dysentery
Alcohol related visits to hospitals
State health expenditure devoted to local health care
Motor vehicle accidents/injury
Hospital admissions for childhood respiratory diseases
Hospital admissions for other respiratory diseases
Hospital admissions for TB
Hospitalization by main cause/hospital days by main cause
Ratio of hospital beds patients
Number of accidents in mines
Number of hospital admissions due to accidents in mines
Number of hospital visits due to respiratory problems
Number of patients with eye problems
Number of visits to ENT clinic

Continued

Table continued

Indicators
Number of casualties due to mine related flooding
Number of patients treated for typhoid/cholera
Number of salmonella typhi /paratyhpi
(typhoid bacteria) and vibrio cholerae isolated
Number of tests positive for enteric diseases (eg. Widal)
Number of hospital admissions due to diarrhoea/dysentry
Number of visits with skin allergy
Number of malaria cases detected
Number of abandoned pits
Increase/decrease in the number of mosquitoes as reported by locals
Increase/decrease in the spray of insecticides by health authorities
Number of cases/annum of bladder cancer
Number of visits/hospital admissions related to nervous system
Number of hospital admissions related to respiratory problems
Number of cases/annum treated for STD
Number of HIV positive cases
Number of patients treated for alcoholism
Number of visits to psychiatrists

DEPARTMENT: DEPARTMENT OF INDUSTRIES AND MINES

Issues: Air
Indicators
Frequency of truck movements

Issues: Land
Indicators
Land use plan for mining areas
New areas brought under mining
Increase in degraded land
Expansion of area under colonies for mine workers, offices, workshops etc.
Tree planting
Change in forest cover

Issues: Land for dumping
Indicators
Existing area occupied by dumps
Forest land used for dumping
Barren land used for dumping
Land reclaimed in dump area
Land reclaimed in excavated area
Land reclaimed in other areas (green belts etc.)
Agricultural land converted for dumps
Vegetation undertaken on dumps

Issues: Mine lease
Indicators
Number of leases renewed
Number of mines actually in operation
Number of mines not worked for more than two years
Mine leases which fall under forest area
Number of abandoned mine pits
Number of ore stacks held by each operators
Monitoring of ore stack by roadside, jetty
Amount of ground water pumped from the pits mine wise
Number of pits with water

Issues: Economic
Indicators
Actual production of ore mine wise
Ore exported
Royalty collected mine wise

Issues: Closure phase
Indicators
Preserve the top soil to use at time of mine closure

Issues: Biodiversity
Indicators
Total number of exotic species introduced in mine lease area
Relative abundance of exotic species within mine lease area
Area of restored or secondary forest
Number of indigenous species used for revegetation
Area of man made forests/plantations
Annual land use change in mine lease
Amount spent on Post mining land reclamation

Issues: Compensation
Indicators
Number of compensation payments made per year
Amount of compensation paid to farmers
Instances of disaffection relating to compensation payments
Baseline data collected to establish compensation amount

DEPARTMENT: AGRICULTURE DEPARTMENT

Issues: Land
Indicators
Soil monitoring
Existence of uncultivated land
Gain/decline in agriculture output per unit area or input
Changes in soil nutrient status
Changes in organic matter in soil
Siltation of agricultural land
Increase in soil erosion

Issues: Compensation
Indicators
Number of compensation payments made per year
Amount of compensation paid to farmers
Instances of disaffection relating to compensation payments
Baseline data collected to establish compensation amount

DEPARTMENT: MAMLATDAR (TALUKA LEVEL)

Issues: Land
Indicators
Existence of uncultivated land

Issues: Compensation
Indicators
Number of compensation payments made per year
Amount of compensation paid to farmers
Instances of disaffection relating to compensation payments
Baseline data collected to establish compensation amount

DEPARTMENT: COLLECTORATE

Issues: Compensation
Indicators
Number of compensation payments made per year
Amount of compensation paid to farmers
Instances of disaffection relating to compensation payments
Baseline data collected to establish compensation amount

DEPARTMENT: BLOCK DEVELOPMENT OFFICE (TALUKA LEVEL)

Issues: Compensation
Indicators
Number of compensation payments made per year
Amount of compensation paid to farmers
Instances of disaffection relating to compensation payments
Baseline data collected to establish compensation amount

DEPARTMENT: DIRECTORATE OF SCIENCE TECHNOLOGY AND ENVIRONMENT

Issues: Land (By using remote sensing technology)
Indicators
% Area of primary forest or reserved forest
% Area of degraded forest
% Area under managed forest
Compositional changes in vegetation cover e.g. mono-cultural plantations
Soil monitoring
New areas brought under mining
Increase in degraded land
Number of land slides
Changes in soil nutrient status
Changes in organic matter in soil
Siltation of agricultural land
Increase in soil erosion
Tree planting
Change in forest cover

DEPARTMENT: METROLOGICAL DEPARTMENT

Issues: Land
Indicators
Number of land slides

DEPARTMENT: IRRIGATION DEPARTMENT

Issues: Land
Indicators
Number of land slides

DEPARTMENT: DIRECTORATE OF TRANSPORT

Issues: Air
Indicators
Frequency of truck movements

DEPARTMENT: DIRECTORATE OF ANIMAL HUSBANDRY

Issues: Land
Indicators
Cattle population
Cattle on roads

DEPARTMENT: DIRECTORATE OF PLANNING, STATISTICS AND EVALUATION

Issues: Land
Indicators
Cattle population
Cattle on roads

Issues: Closure Phase
Indicators
Labour force participation

DEPARTMENT: PANCHAYAT

Issue: Land
Indicators
Expansion of area under colonies for mine workers, offices, workshops etc.

Issue: Health
Indicators
Basic sanitation

DEPARTMENT: TOWN AND COUNTRY PLANNING

Issue: Land
Indicators
Expansion of area under colonies for mine workers, offices, workshops etc.

DEPARTMENT: LABOUR ENFORCEMENT DEPARTMENT

Issues: Closure phase
Indicators
Unemployment rate
Net migration rate
Part time employment
Jobs lost by type
Diversity of local jobs
Incidence of depression
Income stability

DEPARTMENT: MINES SAFETY

Issues: Closure phase
Indicators
Jobs lost by type
Diversity of local jobs
Incidence of depression
Income stability

ANNEXURE V

Village voices

(from focus group meetings held in 2000-2001)

These village voices highlight the conditions that affect their lives adversely and explain differences across villages

Village 1

Land and agriculture:

The village at a time was known for its fields and horticulture. Now, the fields are all dried up and the people depending on agriculture have suffered. Agriculture is the only source of livelihood for many of them 'We will starve if we can't get any returns from agriculture.'
Agriculture was the main source of income for locals and they are not prepared to loose their long- term livelihood. Due to the silt from mining areas, the fields can't be cultivated. Even if the silt is removed, it gets filled again 'We require compensation for undoing the damage already caused'.
Scarcity of ground water is another issue, locals felt impotent to solve this problem. Water shortage is the major problem for the village. 'We do not get enough water at home and for our fields'.
Recent floods that occurred have caused considerable hardship. Due to the collapse of the overburden dumps of an abandoned mine, the *nallah* was filled with silt. There was a flood as the rainwater could not find its way. The houses of the local people collapsed.
No job opportunities to the local people, in the mining sector.

Women specific issues:

The women felt that the major issues of concern affecting their lives were scarcity of groundwater and siltation of fields. In addition, they complained about lack of medical facilities (one doctor visiting the village once a week, no pharmacy in the area), unemployment. They complained that whenever they have raised the issue of providing a job to one person from each family, mining companies have never agreed. In some families there are four-five people who are provided jobs with mining companies. The locals are told that it is because they have leased their land to mining activity that they are given jobs.

Access to education:

Most people were satisfied about the education facilities provided to the children in the village.

Health care:

Lack of medical facilities (doctor, medicines, ambulance) and failure of mining companies or government to provide these facilities.

Employment:

Unemployment is a common problem in the village. Educated youths can't find suitable jobs for themselves.
Mining companies employ not many local people. Only if the land is leased for mining, they are willing to employ people from the family.

Village 2

The main issues here are:

<u>Environmental:</u>

Health, clean water, help farmers, *kulaghars* (betul nut farmers) and bridge income inequalities.
Panchayat (local govt.) has done nothing against the perpetrators of water pollution
Dust and water pollution is the major problem-almost 90% of the problem.
Earlier around 5-10 years ago there was no awareness, today there is an awareness of the positive as well as the negative effects of mining.

<u>Access to government:</u>

The *panchayat* has no power. Above the *panchayat* is the State government, so the *panchayat* has no say.
'*We w*rote to the high court, and we were told to come through proper channels. We are not aware of what the.proper channels are'.
Before the *Panchayat* can contact the Department of Mines, the illegal quarry owners contact the department and then no action is taken.
Mining companies take permission from Central government. So *panchayat* can't say much.
The mining lobbies control politics in Goa.

<u>Access to education:</u>

Students have to walk 5-6 kms to reach the schools and in the monsoon the problem is further compounded as there is silt/slush ('*rev*') on both sides of the road. Even one truck is enough to cause this problem in the monsoon.
'We have asked mine companies to provide school children transportation, today only one company is providing bus transport for the students. This was possible because I threatened to send students from school at the time of mine blasting operations'.

<u>Noise:</u>

Not only from mining but there is an illegal metal quarry which is hardly 100 mts. away from the school and the blast has a very bad effect on the nearby vicinity on both people and wildlife.

<u>Water:</u>

'Earlier we never had a flooding problem. It is in the past two years that we are experiencing floods. This is because the *nallahs* are filled with silt and therefore there is flooding.'

<u>Land:</u>

Land is a crucial issue. Horticulture is affected, however worst affected is paddy. Mining companies do survey the land after the monsoon and, if there is any damage, they pay compensation to the aggrieved party. But the criteria on the basis of which compensation is made is not transparent. This should be more transparent. Some get the compensation and some don't get. 'Compensation is a temporary solution, we are looking for permanent solutions'.
Lot of villagers are still interested in agriculture. Professional agriculturists want to continue with agriculture, compensation is asked by those who want to speculate.
Panchayat is in a better position to process compensation as it is easily accessible. Hardly 10% of the villages know where the Zonal Agricultural office is.

<u>Mine closure:</u>

Not all are directly involved. Those that are directly involved will be hit badly. People indirectly involved in mining don't solely depend on it and hence they will suffer from a decline in the additional source of income.
There is no chance to learn new skills and the income from these new skills is very little compared to that earned from mining.

<u>Health:</u>

The main problems are related to pollution and alcohol.
Alcohol is a major problem and this is affecting the younger generation. There is a lot of gambling also. This could be because of more income due to mining absence of recreational facilities low educational background.
Cashew feni (the local brew) does not affect people as badly as alcohol; but today most people prefer alcohol to feni.

<u>Women:</u>

No, don't think they would be interested in employment in mines as that is a hard job.

ANNEXURE VI
Versions of the QOL tool

QOL Indicators (Version I)

Respondent No.

Are you from this village?

Number of years of stay

Place of work (outside the village/same)

Age

Marital status

Gender

Occupation

Income

Education

Number of people at home

Number of rooms in your house

Family type (joint/nuclear)

Is there any major health problem in the household? (major illness, at home)

Has there been any death (not due to old age) recently at home?

Is there any other major problem at home?

- Economic
- Personal
- Family (children's marriage/education/unemployment)

Are there any major problems at your village (robbery/group wars)

Economic

Descriptive Indicators *(Respondent is asked to describe his/her resources and conditions)*	**Evaluative Indicators** *(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions) Scale of satisfaction*	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
Do you have a regular job (> 6 m/yr)? 1. Yes☐ 2. No☐	If yes, how satisfied are you with it?	1	2	3	4	5
What is your main occupation?	How satisfied are you with it?	1	2	3	4	5
Is your job secure? 1. Yes☐ 2. No☐	How satisfied are you with the level of security?	1	2	3	4	5
What is your monthly wage or salary?	How satisfied are you with your wages/salary?	1	2	3	4	5
What is the average income of your household? (Per month)	How satisfied are you with it?	1	2	3	4	5
Would you be able to meet unforeseen expenses of upto Rs.5000 within a week? (From bank, kin, etc) 1. Yes☐ 2. No☐	How satisfied are you with this cushion?	1	2	3	4	5
What material assets do you have? (jewellery, land) List	How satisfied are you with the amount of assets that you own?	1	2	3	4	5
Do you have access to any traditional livelihood opportunities? 1. Yes☐ 2. No☐	If yes, how do you rate these opportunities?	1	2	3	4	5
How much land do you own? (In ha)	How satisfied are you with it?	1	2	3	4	5
Do you have opportunities/access to learn new skills / develop old skills? 1. Yes☐ 2. No☐	How satisfied are you with these opportunities?	1	2	3	4	5
Do you have access to employment training programmes? 1. Yes☐ 2. No☐	How satisfied are you with them?	1	2	3	4	5
Is your family able to have 3 good meals a day? 1. Yes☐ 2. No☐	How satisfied are you with the nutritional value of the food that your household consumes?	1	2	3	4	5
How much do you spend on food per month?	How satisfied are you with the affordability?	1	2	3	4	5
What is the main fuel used for cooking: 1. Gas☐ 2. Kerosene☐ 3. Fuel-wood☐ 4. Twigs☐ 5. Dung☐ 6. Any other☐	How satisfied are you with this energy source?	1	2	3	4	5

If you use fuel wood for cooking, do you 1. Buy ☐ 2. Collect ☐						
If collected, distance travelled: Within 100 m ☐ Within 500 m ☐ Within 500m -1 km ☐ > 1 km ☐	How satisfied are you with this availability?	1	2	3	4	5
If bought, how much do you spend on fuel wood per month?	How satisfied are you with the affordability?	1	2	3	4	5
Do you have access to paved roads? 1. Yes☐ 2. No☐	How satisfied are you with the quality of roads?	1	2	3	4	5
Do you have access to communication services (postal, email, telegraph)? 1. Yes☐ 2. No☐	How satisfied are you with the availability?	1	2	3	4	5
Do you have access to electricity? 1. Yes☐ 2. No☐	How satisfied are you with the services?	1	2	3	4	5
How much do you spend on electricity/month?	How satisfied are you with the affordability?	1	2	3	4	5
Do you avail of water distributed by public services? 1. Yes☐ 2. No☐	How satisfied are you with the availability?	1	2	3	4	5
Do you use a telephone? 1. Yes 2. No☐ (√ below) a. Public telephone ☐ b. At home ☐	How satisfied are you with the availability?	1 1 1	2 2 2	3 3 3	4 4 4	5 5 5
Can you afford a phone at home? 1. Yes☐ 2. No☐	How satisfied are you with the affordability?	1	2	3	4	5
Do you use the public transport system? 1. Yes☐ 2. No☐	How satisfied are you with availability/frequency of the public transport system?	1	2	3	4	5
How much do you spend on the public transport system/month?	How satisfied are you with the affordability?	1	2	3	4	5
Do you have any livestock? (Number per type)	If yes, are you satisfied with the livestock that you have?	1	2	3	4	5
Do you have places to water and pasture livestock? 1. Yes☐ 2. No☐	How satisfied are you with the availability of watering holes and pasture land?	1	2	3	4	5
How much food do your cattle/livestock need per month/day/year?	How satisfied are you with the availability?	1	2	3	4	5
How much do you spend on food for cattle/livestock per month?	How satisfied are you with the affordability?	1	2	3	4	5

Annual average/monthly income from livestock rearing (average)	How satisfied are you with it?	1	2	3	4	5
Do you fish in inland waters? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
What amenities (such as cars, TV, videos, telephone, fridge, pump set, tubewell) do you have? List	How satisfied are you with them?	1	2	3	4	5

Social

Descriptive Indicators	Evaluative Indicators					
Do you have the support of the extended family and/or friends? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have a good family life? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have good relations with relatives? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have a community life? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Did/Do you have a choice in matters regarding marriage? 1. Yes☐ 2. No☐ 3. Restricted☐	How satisfied are you with the degree of freedom?	1	2	3	4	5
Did /Do you have a choice regarding the number and spacing of children? 1. Yes☐ 2. No☐ 3. Restricted☐	How satisfied are you with the degree of freedom?	1	2	3	4	5
Are you able to express solidarity with others? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
What educational qualification or level have you achieved? (√ Below) a. Primary level ☐ b. Secondary level ☐ c. Post secondary level ☐	How satisfied are you with quality of education that you have had?	1 1 1	2 2 2	3 3 3	4 4 4	5 5 5
Did you have easy access to education? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5

Did /do your children have the opportunity to go to school? 1. Yes☐ 2. No☐	How satisfied are you with the access and quality of education they have received?	1	2	3	4	5
Do you have access to social security benefits? (e.g. free or subsidized medical support, child support, education support from the State, pension) 1. Yes☐ 2. No☐ If no -→ N.A	How satisfied are you with it?	1	2	3	4	5
What kind of Access to information do you have? a. Public-library ☐ b. Private- Newspaper, Television ☐ c. Radio ☐ d. Any other ☐	How satisfied are you with your access?	1	2	3	4	5
Do you have access to any sports facilities? (playground, fields, etc)	How satisfied are you with your access?	1	2	3	4	5
Do you feel physically safe in the village? (i.e. free from crime or the threat of crime) (√ Below) 1. All the time ☐ 2. Most of the time ☐ 3. Some times ☐ 4. Never ☐	How satisfied are you with this sense of being safe?	1	2	3	4	5
Is there alcoholism within your family? 1. Yes☐ 2. No☐ 3. A little ☐	How satisfied are you with the situation?	1	2	3	4	5
Are you able to avail of a house (shelter)? 1. Buy☐ 2. Rent☐ 3. Squat☐ 4. Own☐	How satisfied are you with the situation you find yourself in relation to this?	1	2	3	4	5
What is the kind of sanitation facility available to you? 1. No toilet☐ 2. At home☐ 3. Public toilet ☐ 4. Any other☐	How satisfied are you with the kind of facilities available to you?	1	2	3	4	5

Political

Descriptive indicators	Evaluative Indicators					
Do you participate in decision making/ planning/implementing in any or all of the below? (√ Below)						
a. Household level ☐	How satisfied are you with it?	1	2	3	4	5
b. Village/municipal level ☐	How satisfied are you with it?	1	2	3	4	5

How are you engaged in civic life? (√ Below)	How satisfied are you with your engagement?	1	2	3	4	5
a. By voting ☐	How satisfied are you with the election process?	1	2	3	4	5
b. By being part of a cooperative society ☐	How satisfied are you with your engagement?	1	2	3	4	5
c. Making demands of public services ☐	How satisfied are you with your engagement?	1	2	3	4	5
d. By running for a public position/standing for election ☐	How satisfied are you with your engagement?	1	2	3	4	5
What are the mechanisms you use or support to resolve conflict? (Courts, police, *panchayat*) List	How satisfied are you with them?	1	2	3	4	5
Do you support the use of traditional ways to prevent & resolve conflict (family, other informal groups, religious heads) 1.Yes☐ 2. No☐	How satisfied are you with them?	1	2	3	4	5
Do you use any of the facilities offered by the government? (Starting new ventures/subsidies, support) List	How satisfied are you with them?	1	2	3	4	5
Do you participate in local politics? 1.Yes☐ 2. No☐	How satisfied are you with your participation?	1	2	3	4	5
Are you involved in monitoring critical issues in your village? 1.Yes☐ 2. No☐	How satisfied are you with your participation?	1	2	3	4	5
Do you find that there is enforcement of rules by government bodies? 1.Yes☐ 2. No☐	How satisfied are you with this rule enforcement?	1	2	3	4	5
Do you think there is use/misuse of authority in Goa in general? 1.Yes☐ 2. No☐	How satisfied are you with the situation?	1	2	3	4	5
Do you find the following in your dealings with Government? (√ As appropriate)	How satisfied are you with regard to it?					
a. Honesty ☐		1	2	3	4	5
b. Stability ☐		1	2	3	4	5
c. Accountability ☐		1	2	3	4	5

Do you find you are able to express your opinions about the regime of the day? 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Do you feel you know your legal rights? 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Do you have access to legal aid if you need it? 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Can you afford legal aid if you were to need it? 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Are you aware of your political rights? (Right to free speech, view) 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5

Biophysical

Descriptive Indicators	Evaluative Indicators					
How would you describe the air quality that you are faced with in your daily life? V Bad☐; Bad☐; Fair☐; Good☐; V. Good☐	How satisfied are you with this?	1	2	3	4	5
How would you describe the water quality for drinking that you are faced with in your daily life? V Bad☐; Bad☐; Fair☐; Good☐; V. Good☐	How satisfied are you with this?	1	2	3	4	5
How would you describe the water quality for other purposes in your daily life? V Bad☐; Bad☐; Fair☐; Good☐; V. Good☐	How satisfied are you with this?	1	2	3	4	5
How far do you need to go for drinking water? Within house☐ Within 100 m☐ Within 200 m☐ Within 1 km☐ > 1 km☐	How satisfied are you with this?	1	2	3	4	5
Do you have easy availability of water for other purposes? Within house☐ Within 100 m☐ Within 200 m☐ Within 1 km☐ > 1 km☐	How satisfied are you with this?	1	2	3	4	5
Are you free from noise (loud & constant)? 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5

Is the place you live in free from vibrations? 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
How much land (to cultivate, for pasture) do you have? (In ha)	How satisfied are you with this?	1	2	3	4	5
How would you describe the quality of the land you have to cultivate and maintain animals? V Bad☐; Bad☐; Fair☐; Good☐; V. Good☐	How satisfied are you with this?	1	2	3	4	5
Are there are any plants and animals in the area you live in? 1.Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Are you concerned for the (poor health)/well-being of animals, plants /nature in your surroundings? 1.Yes☐ 2. No☐	How satisfied are you with their state of health?	1	2	3	4	5
How would you describe the changes in the natural landscape around you? V Bad☐; Bad☐; Fair☐; Good☐; V. Good☐	How satisfied are you with this?	1	2	3	4	5
Do you feel exposed to the occurrence of calamities like floods, droughts, landslides, etc? (√ Below) Continuously☐ Periodically in monsoons☐ Rarely☐	How satisfied are you with this state?	1	2	3	4	5
Is the place (you work/live) clean? 1. Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Is the place you work and live accident free? (Vehicular) 1. Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Are there any open/green spaces around the place you work? 1. Yes☐ 2. No☐ You live? 1. Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5

Biomedical

Is there a family welfare centre? (Located within 10 kms radius) .1 Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Are there any maternity clinics/child care centres? (Within 10 kms radius) 1 Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Are there any respiratory disorder clinics? (Within 10 kms radius) 1 Yes☐ 2. No☐	How satisfied are you with this?	1	2	3	4	5
Are there any dental clinics? 1 Yes☐ 2. No☐		1	2	3	4	5
Are there any primary health care facilities? (Within 5 kms radius) 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
How would you describe the quality of health care facilities? (E.g. to have facilities with qualified nurses, regular physician visits, sufficient and clean equipment) V Bad☐; Bad☐; Fair☐; Good☐; V. Good☐	How satisfied are you with it?	1	2	3	4	5
Is there any alternative or traditional medical system available to you? 1 Yes☐ 2. No☐	If yes, how satisfied are you with this?	1	2	3	4	5
Do you have any of the following? (Tick) below 1) Medical insurance (either public☐/ private☐) 2) Medical coverage☐	If yes, how satisfied are you with it?	1	2	3	4	5
Do you find medicines that you need easily available here? 1 Yes☐ 2. No☐	How satisfied are you with the availability?	1	2	3	4	5
How much do you spend on medicines per month?	How satisfied are you with this expenditure?	1	2	3	4	5
Do you or your family use any of the immunisation programmes available? 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5

Can you afford any of the immunisation programmes not supported by the government? 1 Yes☐ 2. No☐	How satisfied are you with the situation?	1	2	3	4	5
How much do you spend on regular health check ups?		1	2	3	4	5
Do you use first aid facilities? 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you get enough sleep/rest? (To have adequate ...sufficient stamina to carry out your daily activities) 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have good appetite and digestion? 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have good reproductive health/ fertility? 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Are you able to experience emotional compatibility with those important to you? 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have vigour and stamina? 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have self-confidence/self-respect? 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you depend on medicines (in order to be able to undertake your daily activities?) 1 Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Does your work involve health and safety risks? 1 Yes☐ 2. No☐	How satisfied are you with the situation you are faced with?	1	2	3	4	5
Till what age do people in your family live on the average? <50☐ 50-75☐ >75☐		1	2	3	4	5

Is there any physical/mental disability in the family? 1. Yes☐ 2. No☐	How satisfied are you?	1	2	3	4	5
Are you free from depression, mental stress, anxiety etc.? 1. Yes☐ 2. No☐	How satisfied are you with your life situation?	1	2	3	4	5
Is there illness in the family? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5

Spiritual

Descriptive Indicators	Evaluative Indicators					
What is the level of spirituality/religion in your life? 1. High☐ 2. Medium☐ 3. Low☐ 4. None☐	How satisfied are you with it?	1	2	3	4	5
Do you believe in customs and traditions/rituals? Yes☐ No☐ Somewhat☐	How satisfied are you with it?	1	2	3	4	5
Are you involved in festivals and religious ceremonies? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you have strong personal beliefs? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Is there a place of worship close by? 1. Yes☐ 2. No☐	How satisfied are you with it?	1	2	3	4	5
Do you believe in God? 1. Yes☐ 2. No☐	How satisfied are you with your level of belief?	1	2	3	4	5

QOL SURVEY INSTRUMENT (version II)

Respondent No.

1. Do you live in this village? (Village Name:)
2. How many years have you lived here?
3. Place of work (outside the village/in the village)
4. Age
5. Marital status
6. Gender
7. Number of people at home
8. Number of people you support economically
9. Number of rooms in your house
10. Family type (joint/nuclear)
11. Has there been any death (not due to old age) recently at home?
12. Are there any major problems at your community (for example, a lot of robbery/village conflict or group wars)

INTRODUCTORY QUESTIONS	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
In general, how satisfied are you with your health?	1	2	3	4	5
In general, how satisfied are you with your quality of life?	1	2	3	4	5

ECONOMIC						
Descriptive *(Respondent is asked to describe his/her resources and life conditions)*	**Evaluative** *(Respondent is asked to evaluate their satisfaction with life his/her conditions)*	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	*Very satisfied*
What is your main occupation?	How satisfied are you with this occupation?	1	2	3	4	5
Do you have a regular job? (> 6 m/yr) 1. Yes ☐ 2. No ☐	If yes, how satisfied are you with it?	1	2	3	4	5
Is your job secure? 1. Yes ☐ 2. No ☐	How satisfied are you with the level of security?	1	2	3	4	5
What is your monthly wage or salary?	How satisfied are you with your monthly wages/salary?	1	2	3	4	5
What is the average income of your household? (Per month)	How satisfied are you with the household income?	1	2	3	4	5
Would you be able to meet unforeseen expenses of up to (insert appropriate amount) within a week? (From bank, kin, etc.) 1. Yes ☐ 2. No ☐	How satisfied are you with this situation?	1	2	3	4	5
What material assets do you own? (jewellery, cattle, land) List:	How satisfied are you with the amount of assets that you own?	1	2	3	4	5
In what other ways do you support yourself and your family economically? List:	How satisfied are you with these means to support you and your family?	1	2	3	4	5
Do you have access to employment training programmes? (From the government or from an employer etc.) 1. Yes ☐ 2. No ☐	How satisfied are you with the employment training programmes?	1	2	3	4	5
Is your family able to have enough to eat in a day? 1. Yes ☐ 2. No ☐ 3. Sometimes ☐	How satisfied are you with the nutritional value of the food that your household consumes?	1	2	3	4	5
How much do you spend on food per month?	How satisfied are you with the affordability?	1	2	3	4	5
Do you have access to postal services (postal, email, telegraph)? 1. Yes ☐ 2. No ☐	How satisfied are you with the services?	1	2	3	4	5
Do you have the use of electricity in your home? 1. Yes ☐ 2. No ☐	How satisfied are you with the electricity services?	1	2	3	4	5

How much do you spend on electricity/month?	How satisfied are you with the affordability?	1	2	3	4	5
Do you use a telephone? 1. Yes ☐ 2. No [ ] (√ below) a. Public telephone ☐ b. At home (land phone) ☐ c. Mobile / Cell Phone ☐	How satisfied are you with the availability of a telephone?	1	2	3	4	5
Can you afford a telephone/mobile phone at home? 1. Yes ☐ 2. No ☐	How satisfied are you with the affordability of your telephone?	1	2	3	4	5
Do you use a public or private transport system? 1. Yes [ ] 2. No [ ]	How satisfied are you with the transport system?	1	2	3	4	5
How much do you spend on transport each month?	How satisfied are you with the affordability?	1	2	3	4	5
Do you have any livestock? (Such as cows, goats, chicken) List number per type:	If yes, are you satisfied with the livestock that you have?	1	2	3	4	5
Do you have places to water and pasture livestock? 1. Yes [ ] 2. No [ ]	How satisfied are you with the availability of watering holes and pastureland?	1	2	3	4	5
Annual average/monthly income from livestock rearing (average)	How satisfied are you with it?	1	2	3	4	5
Do you fish in inland or coastal waters? 1. Yes ☐ 2. No [ ] 3. N/A [ ]	How satisfied are you with it?	1	2	3	4	5
What amenities (such as cars, TV, videos, telephone, fridge, radio) do you have? List:	How satisfied are you with them?	1	2	3	4	5

SOCIAL						
Descriptive *(Respondent is asked to describe his/her resources and conditions)*	Evaluative *(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions)* *Scale of satisfaction*	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
Do you have the social or emotional support of your extended family and/or friends? 1. Yes [ ] 2. No [ ] 3. Sometimes [ ]	How satisfied are you with your situation?	1	2	3	4	5

Do you have a good family life? 1. Yes □ 2. No □ 3. Sometimes □	How satisfied are you with your family life?	1	2	3	4	5
Do you have good relations with relatives? 1. Yes □ 2. No □ 3. Sometimes □	How satisfied are you with the relations with your relatives?	1	2	3	4	5
Do you have a community life? 1. Yes □ 2. No □	How satisfied are you with this situation?	1	2	3	4	5
Did/do you have a choice in matters regarding marriage? 1. Yes □ 2. No □ 3. Restricted □	How satisfied are you with the degree of freedom?	1	2	3	4	5
Did/do you have a choice regarding the number and spacing of Children? 1. Yes □ 2. No □ 3. Restricted □	How satisfied are you with your degree of freedom?	1	2	3	4	5
Are you able to express solidarity with others? 1. Yes □ 2. No	How satisfied are you with this situation?	1	2	3	4	5
Generally, do you have opportunities/access to learn new skills and/or develop old skills? 1. Yes □ 2. No □	How satisfied are you with the opportunity to learn new skills or develop old skills?	1	2	3	4	5
What educational qualification or level have you achieved? (√ Below: as many as apply) 1. None □ 2. Primary level □ 3. Secondary level □ 4. Post secondary level (university) □ 5. Vocational/technical training □	How satisfied are you with the amount of education that you've had?	1	2	3	4	5
Did/do your children have the opportunity to go to school? 1. Yes □ 2. No □	How satisfied are you with their education?	1	2	3	4	5
Do you have access to government or social security benefits? (E.g. free/subsidized medical support, child support, from the government, pension etc.) 1. Yes □ 2. No □ 3. Don't know □	How satisfied are you with this situation?	1	2	3	4	5

What kind of access to information do you have? 1. Public -library □ 2. Private - Newspaper, Television □ 3. Radio □ 4. Any other □	How satisfied are you with your access?	1	2	3	4	5
Do you /your family have access to any sports facilities? (playground, fields, etc.) 1. Yes □ 2. No □	How satisfied are you with their accessibility?	1	2	3	4	5
Do you feel physically safe in the village? (i.e. free from crime or the threat of crime) (√ Below) 1.All the time [ ] 2.Most of the time [ ] 3.Some times [ ] 4. Never [ ]	How satisfied are you with this sense of being safe?	1	2	3	4	5
Is there any alcoholism within your family? 1. Yes □ 2. No [ ] 3. A little [ ]	How satisfied are you with the situation?	1	2	3	4	5
Are you able to use a house (shelter)? 1. Squat (temporary) [ ] 2. Rent [ ] 3. Own home [ ]	How satisfied are you with the situation you find yourself in relation to this?	1	2	3	4	5
What is the kind of sanitation facility available to you? 1. No toilet [ ] 2. Public toilet [ ] 3. At home [ ] 4. Any other [ ]	How satisfied are you with the kind of facilities available to you?	1	2	3	4	5

POLITICAL						
Descriptive *(Respondent is asked to describe his/her resources and conditions)*	Evaluative *(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions)* *Scale of satisfaction*	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
Do you participate in decision making in the household level? 1. Yes [ ] 2. No [ ]	How satisfied are you with your amount of participation?	1	2	3	4	5

Do you participate in decision making in the village/community level? 1. Yes ☐ 2. No ☐	How satisfied are you with your amount of participation?	1	2	3	4	5
How are you engaged in civic/community life? (√ Below) 1. Do you vote ☐ 2. Making demands of public services ☐ 3. Have you run for/been in an elected or appointed public position ☐ 4. None of above ☐	How satisfied are you with your engagement?	1	2	3	4	5
What are the mechanisms you use or support to resolve conflict? (Formal – courts, police, informal – traditional etc.) List:	How satisfied are you with the formal mechanisms?	1	2	3	4	5
Do you support the use of traditional ways to prevent & resolve conflict (family, other informal groups, religious heads) 1.Yes ☐ 2. No ☐	How satisfied are you with the informal / traditional ways to resolve conflict?	1	2	3	4	5
Do you participate in local politics? 1.Yes ☐ 2. No ☐	How satisfied are you with your participation?	1	2	3	4	5
Are you involved in monitoring critical issues in your village? 1.Yes ☐ 2. No ☐	How satisfied are you with your involvement?	1	2	3	4	5
Do you find that government bodies enforce the rules of law? (For example, the police, courts, administrators etc.) 1.Yes ☐ 2. No ☐ 3. Sometimes ☐	How satisfied are you with this situation?	1	2	3	4	5
Do you think there is good use of authority in (insert country's name) in general? 1.Yes ☐ 2. No ☐	How satisfied are you with the situation?	1	2	3	4	5
Do you find the following in your dealings with Government? (√ As appropriate) 1. Honest ☐ 2. Stable/consistent ☐ 3. Accountable ☐ 4. None of the above ☐	In general, how satisfied are you with regard to your government dealings?	1	2	3	4	5
Do you find you are able to express your opinions about the government /regime of the day? 1.Yes ☐ 2. No ☐	How satisfied are you with this degree of freedom of expression?	1	2	3	4	5

Do you feel you know your legal rights? 1.Yes □ 2. No □ 3. Some of them □ For example: Do you know that you cannot own land?	How satisfied are you with your level of awareness of your legal rights?	1	2	3	4	5
Do you have access to legal aid if you need it? 1.Yes □ 2. No □	How satisfied are you with this situation?	1	2	3	4	5
Can you afford legal aid or a lawyer if you were to need it? 1.Yes □ 2. No □	How satisfied are you with this situation?	1	2	3	4	5
Are you aware of your political rights? (Right to free speech, right to vote) 1.Yes □ 2. No □ 3. Some of them [ ]	How satisfied are you with your level of awareness of your political rights?	1	2	3	4	5

BIOPHYSICAL						
Descriptive *(Respondent is asked to describe his/her resources and conditions)*	Evaluative *(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions)* *Scale of satisfaction*	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
How would you describe the air quality that you are faced with in your daily life? 1. V. Bad □ 2. Bad □ 3. Fair □ 4. Good □ 5. V. Good [ ]	How satisfied are you with this situation?	1	2	3	4	5
What is your source of water? 1.Bore hole/well [ ] 2.Public Utility [ ] 3.Private company [ ]	How satisfied are you with the availability of water?	1	2	3	4	5
How would you describe the water quality for drinking that you are faced with in your daily life? 1. V. Bad □ 2. Bad □ 3. Fair □ 4. Good □ 5. V. Good [ ]	How satisfied are you with this situation?	1	2	3	4	5

		1	2	3	4	5
How far do you need to go for drinking water? 1.In house □ 2.Within 100 m □ 3.Within 200 m □ 4.Within 1 km □ 5.> 1 km □	How satisfied are you with this situation?	1	2	3	4	5
Do you have easy availability of water for other purposes? 1.In house □ 2.Within 100 m □ 3.Within 200 m □ 4.Within 1 km □ 5.> 1 km □	How satisfied are you with this situation?	1	2	3	4	5
Are you free from noise in your day-to-day life (loud & constant)? 1.Yes □ 2. No □	How satisfied are you with this situation?	1	2	3	4	5
Is the place you live in free from vibrations from man-made sources? (From blasting, large trucks etc.) 1.Yes □ 2. No □	How satisfied are you with this situation?	1	2	3	4	5
How much land (to cultivate, for pasture) do you have? (In ha)	How satisfied are you with the amount?	1	2	3	4	5
How would you describe the quality of the land you have to cultivate and maintain animals? 1. V Bad □ 2. Bad □ 3. Fair □ 4. Good □ 5. V. Good □	How satisfied are you with this?	1	2	3	4	5
How would you describe the changes in the natural landscape around you? 1. No Changes □ 2. V. Bad □ 3. Bad □ 4. Fair □ 5. Good □ 6. V. Good □	How satisfied are you with these changes?	1	2	3	4	5
Do you feel exposed to the occurrence of calamities like floods, droughts, landslides, etc? (√ Below) 1. Continuously □ 2. Periodically in rains/monsoons □ 3. Rarely □	How satisfied are you with this state?	1	2	3	4	5

In general, is your village/community area clean? 1. Yes ☐ 2. No ☐	How satisfied are you with this?	1	2	3	4	5
Is the place you work and live free from car/truck accidents? 1. Yes [ ] 2. No [ ]	How satisfied are you with this?	1	2	3	4	5
Are there any open/green spaces around the place you work? 1. Yes ☐ 2. No ☐	How satisfied are you with this?	1	2	3	4	5
Are there any open/green spaces around the place where you live? 1. Yes ☐ 2. No ☐	How satisfied are you with this?	1	2	3	4	5

BIOMEDICAL						
Descriptive *(Respondent is asked to describe his/her resources and conditions)*	**Evaluative** *(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions)*	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
Is there any health clinic located within 10 kms radius? 1. Yes [ ] 2. No [ ]	How satisfied are you with its closeness?	1	2	3	4	5
Is there any maternity clinic? (Within 10 kms radius) 1. Yes [ ] 2. No [ ]	How satisfied are you with its closeness?	1	2	3	4	5
Are there any dental clinics? 1. Yes [ ] 2. No [ ]	How satisfied are you with the availability of dental services?	1	2	3	4	5
How would you describe the quality of health care facilities? (E.g. to have facilities with qualified nurses, regular physician visits, sufficient and clean equipment) 1. V. Bad [ ] 2. Bad [ ] 3. Fair [ ] 4. Good [ ] 5. V. Good [ ]	How satisfied are you with the centre's quality?	1	2	3	4	5
Do you have to pay for your medical services? 1. Yes [ ] 2. No [ ]	If yes, how satisfied are you with the affordability of the medical services?	1	2	3	4	5
Is there any alternative or traditional medical system available to you? 1. Yes [ ] 2. No [ ]	If yes, how satisfied are you with this?	1	2	3	4	5
Do you find that the modern pharmaceutical medicines that you need are easily available? 1. Yes [ ] 2. No [ ]	How satisfied are you with the availability?	1	2	3	4	5

Do you find that the traditional medicines that you need are easily available? 1. Yes ☐ 2. No ☐ 3. N/A ☐	How satisfied are you with the availability?	1	2	3	4	5
How much do you spend on medicines per month?	How satisfied are you with this expense/cost?	1	2	3	4	5
Do you or your family use any of the immunization programmes available? 1. Yes ☐ 2. No ☐	How satisfied are you with their availability?	1	2	3	4	5
Generally, do you get enough sleep? 1. Yes ☐ 2. No ☐	How satisfied are you with the amount of sleep/rest you get?	1	2	3	4	5
Do you have good appetite and digestion? 1. Yes ☐ 2. No ☐	How satisfied are you with your appetite?	1	2	3	4	5
Do you have good reproductive health /f ertility? 1. Yes ☐ 2. No ☐	How satisfied are you with it?	1	2	3	4	5
Are you able to experience emotional compatibility with those important to you? 1. Yes ☐ 2. No ☐	How satisfied are you with this situation?	1	2	3	4	5
Do you have enough energy to carry out your day-to-day activities? 1. Yes ☐ 2. No ☐	How satisfied are you with your amount of daily energy?	1	2	3	4	5
Do you have self-confidence/self-respect? 1. Yes ☐ 2. No ☐	How satisfied are you with your level of confidence?	1	2	3	4	5
Do you depend on medicines (in order to be able to undertake your daily activities?) 1 Yes ☐ 2. No ☐	How satisfied are you with this situation?	1	2	3	4	5
Do you depend on medicinal plants (in order to be able to undertake your daily activities?) 1 Yes ☐ 2. No ☐	How satisfied are you with this situation?	1	2	3	4	5
Do you have good physical health? 1. Yes ☐ 2. No ☐	How satisfied are you with your physical health?	1	2	3	4	5
Does your work involve health and safety risks? 1. Yes ☐ 2. No ☐	How satisfied are you with the health and safety situation you are faced with?	1	2	3	4	5
What age do people in your family generally live? 1.< 50 ☐ 2.50 - 75 ☐ 3.>75 ☐	How satisfied are you with this situation?	1	2	3	4	5
Have all of your children survived? 1. 0 dead ☐ 2. < 3 dead ☐ 3 .3 - 5 dead ☐ 4. > 5 dead ☐	How satisfied are you with this situation?	1	2	3	4	5

Are you free from depression, mental stress, anxiety etc.? 1. Yes ☐ 2. No ☐	How satisfied are you with your life situation?	1	2	3	4	5
Is everyone in the household in good health? 1. Yes ☐ 2. No ☐	How satisfied are you with the situation?	1	2	3	4	5

SPIRITUAL						
Descriptive *(Respondent is asked to describe his/her resources and conditions)*	**Evaluative** *(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions)*	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
How would you rate the level or degree of spirituality/religion in your life? 1. High ☐ 2. Medium ☐ 3. Low ☐ 4. N/A ☐	How satisfied are you with this situation?	1	2	3	4	5
Do you believe in religious or cultural customs and traditions and/or rituals? Yes ☐ No ☐ Somewhat ☐	How satisfied are you with it?	1	2	3	4	5
Are you involved in festivals and religious ceremonies? 1. Yes ☐ 2. No ☐	How satisfied are you with your involvement?	1	2	3	4	5
Is there a place of worship, such as a church or mosque, close by? 1. Yes ☐ 2. No ☐	How satisfied are you with the accessibility of a place of worship?	1	2	3	4	5
Do you believe in (a) God? 1. Yes ☐ 2. No ☐	How satisfied are you with your level of belief?	1	2	3	4	5

QOL Indicators (version III)

Respondent No.

Are you from this village?

Number of years of stay

Age

Marital status

Gender

Number of people at home

Number of rooms in your house

Family type (joint/nuclear)

Has there been any death (not due to old age) recently at home?

Are there any major problems at your village (robbery/group wars)

Economic

Employment and work conditions	
Do you have a regular paid employment (> 6 m/yr)?	1. Yes ☐ 2.No ☐
What is your main occupation?	
Do you feel that your job is secure?	1. Yes ☐ 2.No ☐
Satisfaction with job	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Income	
What is your monthly wage or salary?	
What is the average income of your household? (Per month)	
Would you be able to meet unforseen expenses of upto Rs.5000 within a week? (From bank, kin, etc)	1. Yes ☐ 2.No ☐
Satisfaction with income	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Opportunity space	
Do you have access to any traditional livelihood opportunities?	1. Yes ☐ 2.No ☐
Do you have opportunities/access to learn new skills/develop old skills?	1. Yes ☐ 2.No ☐
Do you have access to employment training programmes?	1. Yes ☐ 2.No ☐
How satisfied are you with the opportunities that you have?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Nutrition	
How much do you spend on food per month?	
Do you and your family have sufficient food to eat in a day?	1. Yes ☐ always 2.No ☐ 3. Sometimes ☐
Satisfaction with nutritional levels	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Fuel used	
What is the main cooking fuel used?	1. Gas ☐ 2. Kerosene ☐ 3. Fuel wood ☐ 4. Twigs ☐ 5. Dung ☐ 6. Any other ☐
If collected, distance travelled:	1.Within 100 m ☐ 2.Within 500 m ☐ 3. Within 500m –1 km ☐ 4. >1 km ☐ 5. >Fuel wood bought ☐

How frequently do you collect firewood? How long does it take?	(Per week) (In time)
How much do you spend on fuel per month?	
How satisfied are you with fuel availability?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
How satisfied are you with fuel affordability?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Infrastructure	
Do you have access to communication services (postal, email, telegraph)?	1. Yes ☐ 2.No ☐
Do you have electricity in your home?	1. Yes ☐ 2.No ☐
How much do you spend on electricity/month?	
Do you avail of water distributed by public services?	1. Yes ☐ 2.No ☐
Do you use a telephone?	1. Yes ☐ 2.No ☐ If yes, (√ below) a. Public telephone ☐ b. At home ☐ c. Mobile/cellular phone ☐
Can you afford a phone at home?	1. Yes ☐ 2.No ☐
Do you use the public transport system?	1. Yes ☐ 2.No ☐
How much do you spend on the public transport system/month?	
How satisfied are you with the above services	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Assets	
What material assets do you have? (Jewellery)	List
How much land do you own? (In ha)	
Do you have any livestock? (Number per type)	1. Yes ☐ 2.No ☐
Do you have sufficient places to water and pasture livestock?	1. Yes ☐ 2.No ☐

Annual average/monthly income from livestock rearing (average)	
Do you fish in inland waters?	1. Yes □ 2.No □ 3. NA □
Satisfaction with these additional assets	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □
What amenities do you have?	1. Cars □ 2. TV □ 3.Videos □ 4. Telephone □ 5. Fridge □ 6 Pump set □ 7.Tubewell □ 8. Truck □ 9. Cable □
How satisfied are you with them?	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □
Do you use any of the facilities offered by the government? (Starting new ventures/ subsidies, support, loan) List	1. Yes □ 2.No □ *If yes, list*

Social

Family & community life	
Do you have the support of the extended family and/or friends?	1. Yes □ always 2.No □ 3. Sometimes □
Do you have a good family life?	1. Yes □ most of time 2.No □ 3. Sometimes □
Do you have good relations with relatives?	1. Yes □ 2.No □ 3. Sometimes □
Do you have a community life?	1. Yes □ 2.No □ 3. Sometimes □
Are you able to express solidarity with others?	1. Yes □ 2.No □
Satisfaction with family	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □
Satisfaction with community life	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □
Choices re marriage and reproduction	
Did/do you have a choice in matters regarding marriage?	1. Yes □ 2.No □ 3. Restricted □ 4. N.A.
How satisfied are you with the degree of freedom?	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □

Did/do you have a choice regarding the number and spacing of children?	1. Yes ☐ 2.No ☐ 3.Restricted ☐ 4. N.A.
How satisfied are you with the degree of freedom?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Education	
What educational qualification or level have you achieved?	a. Primary level ☐ b. Secondary level ☐ c. Post secondary level ☐ d. Vocational training ☐
How satisfied are you with your level of education attained?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Did/do your children have the opportunity to go to school?	1. Yes ☐ 2.No☐
How satisfied are you with the education they have received?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Social security	
Do you have access to social security benefits? (E.g. free or subsidized medical support, child support, education support from the State, pension)	1. Yes ☐ 2.No ☐ 3. Do not know ☐
Satisfaction with social security	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
What kind of access to information do you have?	Public-library ☐ Private-Newspaper, Television ☐ Radio ☐ Any other ☐
Do you and/or your family have access to any sports facilities? (playground, fields, etc)	1. Yes ☐ 2.No ☐
Do you feel physically safe in the village? (I.e. free from crime or the threat of crime) (√ Below)	All the time ☐ Most of the time ☐ Some times ☐ Never ☐
Is there alcoholism within your family?	1. Yes ☐ 2.No ☐ 3. A little ☐

Housing & shelter	
Ownership status of your house (shelter)?	1. Own ☐ 2. Rent ☐ 3. Shared ☐
How satisfied are you with your housing?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
What is the kind of sanitation facility available to you?	1. No toilet ☐ 2. Inside home ☐ 3. Outside home ☐ 4. Public toilet ☐ 5. Any other☐
How satisfied are you with your sanitation facilities?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐

Political

Participation	
Do you participate in decision making/ planning/ implementing in any or all of the below? (√ Below)	a. Household level ☐ b. Village/municipal level ☐
How are you engaged in civic life? (√ Below)	a. By voting ☐ b. By being part of a cooperative society ☐ c. Making demands of public services ☐ d. By running for a public position/standing for election ☐
How satisfied are you with your engagement?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Do you participate in local politics?	1. Yes ☐ 2.No ☐
Are you involved in monitoring critical issues in your village?	1. Yes ☐ 2.No ☐
How satisfied are you with your participation?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Governance	
Do you find that there is enforcement of rules by government bodies?	1. Yes ☐ 2.No ☐ 3. Do not know ☐
Do you think there is misuse of authority in Goa in general?	1. Yes ☐ 2.No ☐ 3. Do not know ☐

Do you find the following in your dealings with Government? (√ As appropriate)	a. Honesty ☐ b. Stability ☐ c. Accountability ☐ d. None of the above θ
How satisfied are you with governance in Goa?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Conflict resolution	
What are the mechanisms you use or support to resolve conflict? (Courts, police, *panchayat*)	
Do you support the use of traditional ways to prevent & resolve conflict (family, other informal groups, religious heads)	1.Yes ☐ 2. No ☐
How satisfied are you with the conflict resolution mechanisms that you have access to?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Political & legal rights	
Do you feel/ think you know your legal rights?	1. Yes ☐ 2.No ☐ 3.Sometimes ☐
Do you have access to legal aid if you need it?	1. Yes ☐ 2.No ☐
Can you afford legal aid if you were to need it?	1. Yes ☐ 2.No ☐
Are you aware of your political rights? (Right to free speech, view)	1. Yes ☐ 2.No ☐ 3. Some of them ☐
Satisfaction with political and legal situation	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐

Environmental

How would you describe the air quality that you are faced with in your daily life?	1. V Bad ☐ 2. Bad ☐ 3. Fair ☐ 4. Good ☐ 5. V. Good ☐
Are you free from noise (loud & constant)?	1. Yes ☐ 2.No ☐
Is the place you live in free from man made vibrations?	1. Yes ☐ 2.No ☐
Satisfaction with level of noise and vibrations	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
How would you describe the water quality for drinking that you are faced with in your daily life?	1.V Bad ☐ 2. Bad ☐ 3. Fair ☐ 4. Good ☐ 5. V. Good ☐

How would you describe the water quality for other purposes in your daily life?	1. V Bad ☐ 2. Bad ☐ 3. Fair ☐ 4. Good ☐ 5. V. Good ☐
How far do you need to go for drinking water?	1. Within house ☐ 2. Within 100 m ☐ 3. Within 200 m ☐ 4. Within 1 km ☐ 5. > 1 km ☐
Do you have easy availability of water for other purposes?	1. Within house ☐ 2. Within 100 m ☐ 3. Within 200 m ☐ 4. Within 1 km ☐ 5. > 1 km ☐
Satisfaction with water availability	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Satisfaction with water quality	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
How would you describe the changes in the natural landscape around you?	1. No change ☐ 2. V Bad ☐ 3. Bad ☐ 4. Fair ☐ 5. Good ☐ 6. V. Good ☐
How would you describe the quality of the land you have to cultivate and maintain animals?	1. V Bad ☐ 2. Bad ☐ 3. Fair ☐ 4. Good ☐ 5. V. Good ☐
How would you describe the changes in the number or quantity of plants in your area over the last ten years?	1. No change ☐ 2. Decreasing amount ☐ 3. Increasing amount ☐
How would you describe the changes in the number or quantity of animals in your area over the last ten years?	1. No change ☐ 2. Decreasing amount ☐ 3. Increasing amount ☐
Do you feel exposed to the occurrence of calamities like floods, droughts, landslides, etc?	1. Periodically in monsoons ☐ 2. Continuously ☐ 3. Rarely☐
Satisfaction with the overall quality of your physical environment	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐

Is the place (you work/live) clean?	1. Yes ☐ 2.No ☐
Are there any open/green spaces around the place of work?	1. Yes ☐ 2.No ☐
Are there any open/green spaces around the place you live?	1. Yes ☐ 2.No ☐
Satisfaction with the overall appearance of the surrounding landscape	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐

Biomedical

Is there a family welfare centre? (Located within 10 kms radius)	1. Yes ☐ 2.No ☐
Are there any maternity clinics/child care centres? (Within 10 kms radius)	1. Yes ☐ 2.No ☐
Are there any dental clinics?	1. Yes ☐ 2.No ☐
Are there any primary health care facilities? (Within 5 kms radius)	1. Yes ☐ 2.No ☐
How would you describe the quality of health care facilities? (E.g. to have facilities with qualified nurses, regular physician visits, sufficient and clean equipment)	1. V Bad ☐ 2. Bad ☐ 3. Fair ☐ 4. Good ☐ 5. V. Good ☐
Satisfaction with health facilities available	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Is there any alternative or traditional medical system available to you?	1. Yes ☐ 2.No ☐
How satisfied are you with the alternative or traditional medical system?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
Do you or your family use any of the immunisation programmes available?	1. Yes ☐ 2.No ☐ 3. NA ☐
Do you have any of the following?	1) Medical insurance Public☐ /Private☐) 2) Medical coverage ☐
Do you find western/modern medicines that you need easily available here?	1. Yes ☐ 2.No ☐
How much do you spend on medicines per month?	
Can you afford any of the immunisation programmes not supported by the government?	1. Yes ☐ 2.No ☐
Do you get enough sleep/rest? (To have adequate ...sufficient stamina to carry out your daily activities)	1. Yes ☐ 2.No ☐
Do you have good appetite and digestion?	1. Yes ☐ 2.No ☐
Do you have good reproductive health/fertility?	1. Yes ☐ 2.No ☐ 3. NA ☐

Do you have sufficient vigour and stamina to carry out your daily activities?	1. Never □ 2. Some of the time □ 3. Most of the time □ 4. All of the time □
Do you depend on western/modern medicines (in order to be able to undertake your daily activities?)	1. Yes □ 2.No □
How satisfied are you with your health status in general?	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □
Are you able to experience emotional compatibility with those important to you?	1. Yes □ 2.No □
Do you have self–confidence/self-respect?	1. Yes □ 2.No □ 3. Sometimes □
How satisfied are you with your emotional life?	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □
Does your work involve health and safety risks?	1. Yes □ 2.No □ 3. NA □
How satisfied are you with the health and safety work situation you are faced with?	1. VDS □ 2. DS □ 3. N □ 4. S □ 5. VS □
Is your family free from any physical or mental disabilities?	1. Yes □ 2.No □
Are you free from depression, mental stress, anxiety etc.?	1. Yes □ 2.No □
Has there been any death of young children in your family?	1. Yes □ 2.No □ 3. NA □
Is your family free from any acute or chronic illness?	1. Yes □ 2.No □
Type of frequent or recurring illness in the family	Colds/asthma/diarrhoea / malaria/dysentery/other

Spiritual

What is the level of spirituality/religion in your life?	1. High □ 2. Medium □ 3. Low □ 4. None □
Do you believe in customs and traditions/rituals?	1. Yes □ 2.No □ 3.Somewhat □
Are you involved in festivals and religious ceremonies?	1. Yes □ 2.No □
Do you have strong personal beliefs?	1. Yes □ 2.No □
Is there a place of worship close by?	1. Yes □ 2.No □

Do you believe in a God?	1. Yes ☐ 2.No ☐
How satisfied are you with your spiritual life?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
How satisfied are you with the accessibility of places of worship?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐
How satisfied are you with your life in general?	1. VDS ☐ 2. DS ☐ 3. N ☐ 4. S ☐ 5. VS ☐